FASTFACTS

Leveraging oncology gene expression signatures to accelerate research

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RNA signatures are at the forefront of cancer research and are used to enhance study outcomes and accelerate the translation of findings from bench to clinic. NanoString provides a range of innovative oncology solutions, including RNA expression signatures that span immuno-oncology, breast cancer, and lymphoma.

SIGNATURE & ANALYSIS OPTIONS

A number of panels with clinically, analytically, and biologically established signatures are available, including the PanCancer IO 360™ panel, the Breast Cancer 360™ (BC 360) panel, the RUO Lymphoma Subtyping Test (LST) CodeSet, and the RUO PAM50 CodeSet. All panels have the ability to spike-in 55 genes of interest. These signatures can be used to vastly improve the statistical power and interpretation of data.

Signature data analysis services (DAS) by experts in nCounter data can expedite research, including full analysis reports **(Figure 1)**. These reports can distil large amounts of data into actionable signatures and provide publication-ready figures in a customizable way.

THE 360 SERIES

The 360 series is designed to give a holistic view of the tumor, tumor microenvironment, and immune response, with customizable options for the addition of genes.

The PanCancer IO 360™ gene expression panel contains 770 human genes in total, profiling the tumor, microenvironment, and immune response. It contains 48 biological signatures, including the Tumor Inflammation Signature (TIS) which measures activity known to be associated with response to PD-1/PD-L1 blockade therapy. The other 47 research signatures focus on biological themes such as tumor immunogenicity, inhibitory tumor mechanisms, anti-tumor immune activity, stromal factors, inhibitory immune signaling, and immune cell population abundance.

The BC 360 bulk gene expression panel contains 48 signatures across 13 categories measuring biological variables crucial to breast cancer tumor biology. Validated signatures in the report include PAM50 subtypes, Risk of Recurrence (ROR) and the Tumor Inflammation Signature. Additional research signatures focus on areas such as triple-negative breast cancer (TNBC) or Claudin-Low subtyping, signaling pathways, and tumor immunogenicity.

In order to expedite analysis to insight, 360 data analysis reports provide easy data interpretation, publication-ready figures and statistical outputs, as well as a consultative report out with a scientist. A summary of the attributes of the 360 series is given in **Figure 2**.

The 360 data analysis reports contain a customizable selection of response, grouping analysis, or survival analysis tailored to customer needs. Analysis outputs cover differential expression, survival analysis, and analytical plots.

BUILT-IN BIOINFORMATICS

NanoString panels have bioinformatics built-in. In the design of each panel, foundational scientific framework was leveraged and integrated with state-of-the-art knowledge of the biology. Research community resources were engaged in the development of simple and powerful data analysis tools.

ADDITIONAL ANALYSIS SERVICE OFFERINGS

For deeper insights, DAS scientists can use nSolver™ analysis software to provide advanced statistics and robust visualizations from any nCounter panel data.

Find out more Information about LST, PAM50, TIS and 360 signatures and access IO 360 and BC 360 demo reports

Email us for more details on accessing NanoString's Data Analysis Services: support@nanostring.com

Figure 1. Signature and analysis options and key benefits.

- ✓ Professional analysis from experts
- ✓ Highly consultative
- ✓ Publication - ready figures
- ✓ Fast turn around time
- ✓ Interactive one-on-one data review

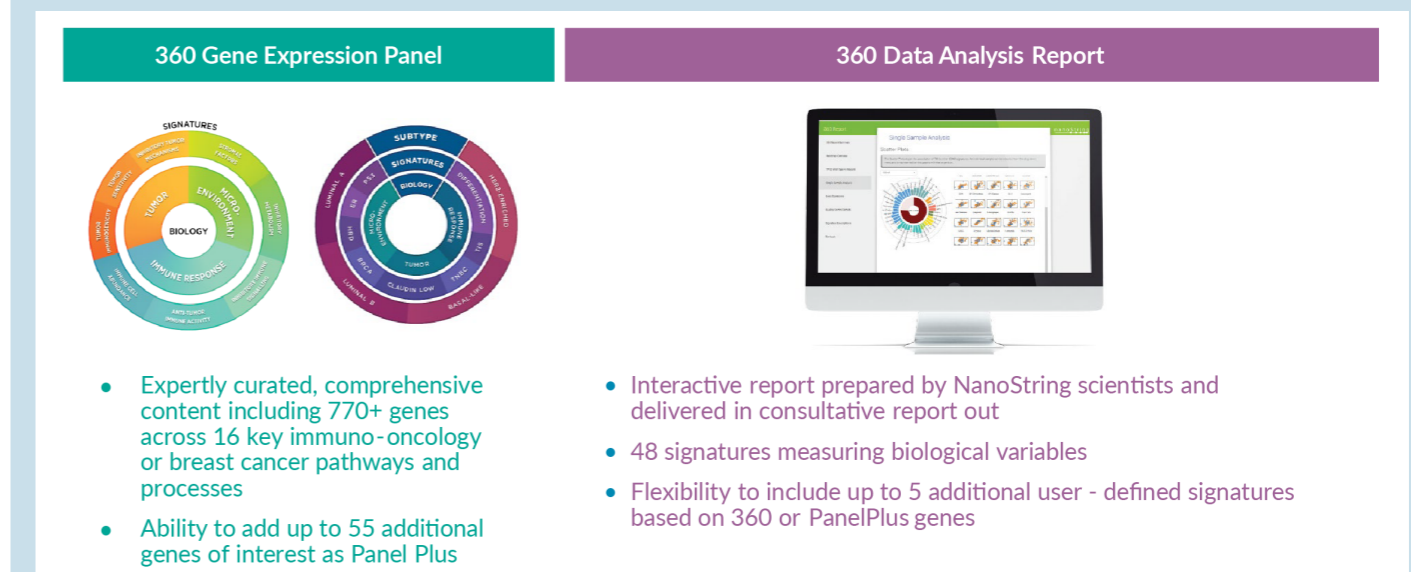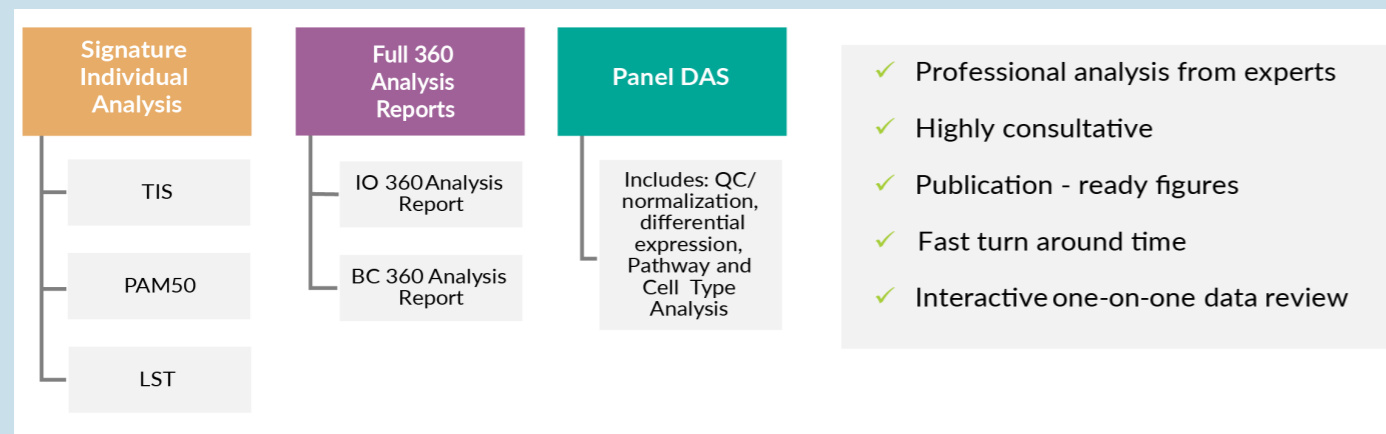### Figure 2. 360 Panel and data analysis reports allow discovery and validation of novel biomarkers and signatures.

360 Gene Expression Panel

- Expertly curated, comprehensive content including 770+ genes across 16 key immuno-oncology or breast cancer pathways and processes
- Ability to add up to 55 additional genes of interest as Panel Plus

360 Data Analysis Report

- Interactive report prepared by NanoString scientists and delivered in consultative report out
- 48 signatures measuring biological variables
- Flexibility to include up to 5 additional user - defined signatures based on 360 or PanelPlus genes

In partnership with:

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