UAB Nanostring Laboratory

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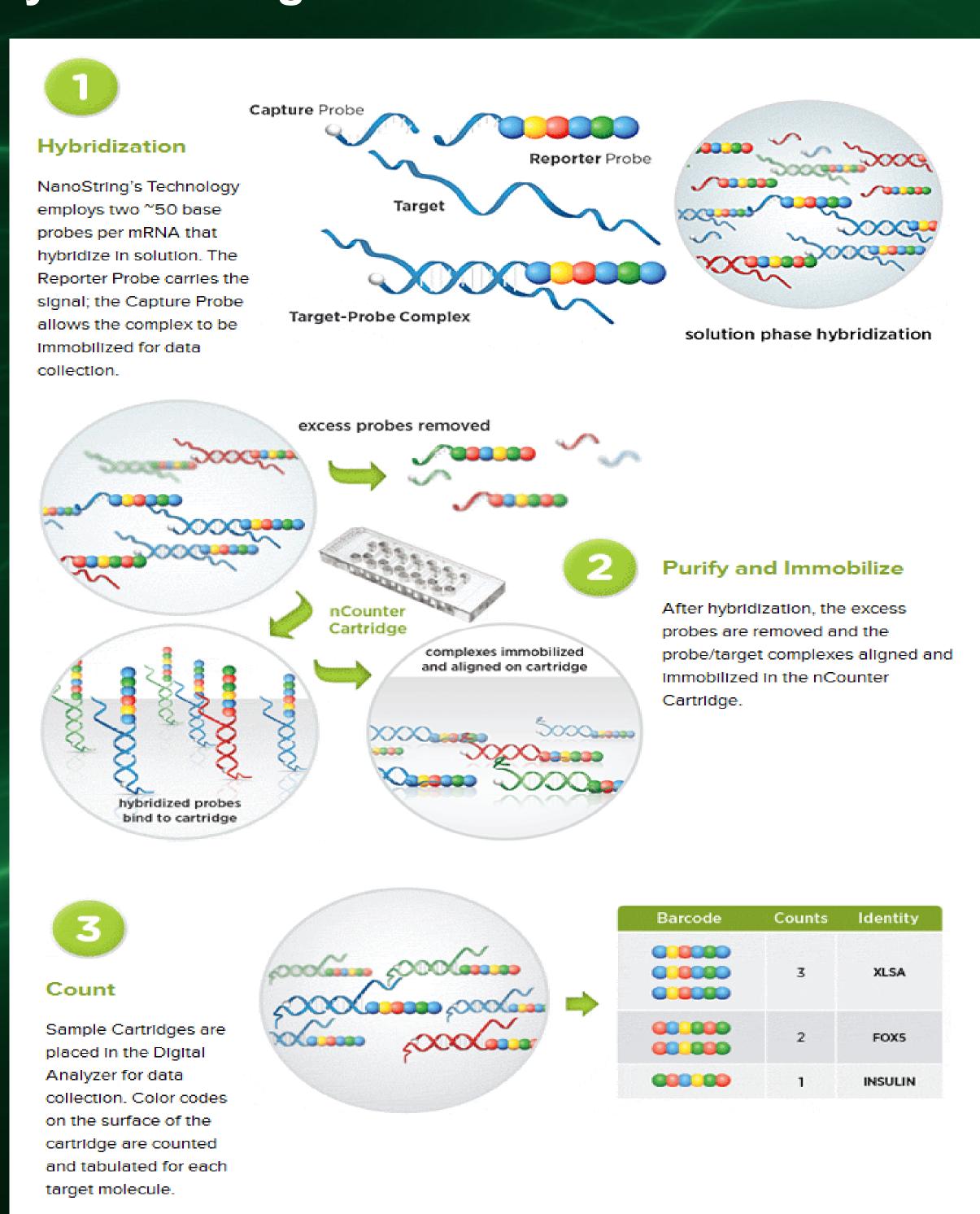
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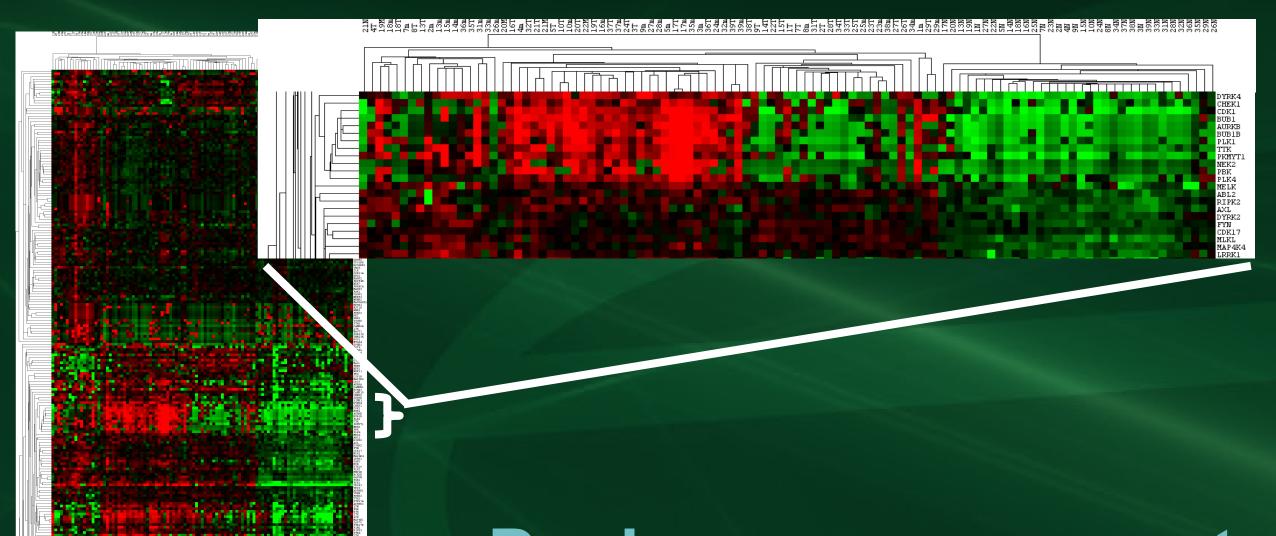
Nanostring Technology

This platform enables the profiling of hundreds of targets simultaneously with high sensitivity and precision, even in formalin fixed paraffin embedded (FFPE) tissues, without the need for amplification steps except in single cell or low cell number experiments. The system utilizes a novel digital technology that is based on direct multiplexed quantification of nucleic acids and provides highly reproducible data over 5 logs of PanCancer: dynamic range.



Key Advantages

- only 100ng of total RNA is required
- from cell lysates, fresh or frozen tissue, FFPE samples or whole blood lysates
- No amplification done, more quantitative
- Fewer replicates required



Results

- Fold change in gene expression represented as heat maps
- Significance of changes in 13 key cancer pathways with PanCancer Pathways

Design your own custom panel or use a pre-made panel:

Pathways: 770 genes, all 13 pathways: Notch, Wnt, HedgeHog, Chromatin

Modification, Transcriptional Regulation, DNA Damage Control,

TGF-β, MAPK, STAT, RAS, P13K, Cell Cycle, Apoptosis

Human or Mouse,770 genes: antigen processing, senscence, Immune:

regulation; cell, macrophage, NK cell, B-cell, transporter, T-cell,

microglial, leukocyte functions; pathogen defense, TNF superfamily,

chemokines, cytokines, cytotoxicity, cell cycle, adhesion, TLR,

complement, interleukins

Progression: 770 genes total consisting of Angiogenesis (277 genes), ECM (254

genes), EMT (269 genes) and Metastasis (173 genes)

Profiles: 180 genes, select 1 pathway: Adaptive Immunity, Innate Immunity,

Cancer Metabolism, Intracellular signaling, Cellular Profiling, Wnt,

DNA Damage and Repair + can add up to 30 more custom genes

Many Others including:

RNA:Protein Immune Cell Profiling: same 770 genes as PanCan Immune with 30 proteins simultaneously

miRGE: human, mouse, rat or fly; 100-200 mRNA, 5-30 miRNA simultaneously

Human or Mouse Immunology (594/561 genes) Human Kinase (522 genes) Human or Mouse Inflammation (249 /248 genes) Stem Cell (194 genes)

Human or Mouse or Rat miRNA (800/>600/423 genes) **Gene Fusion**

Human Cancer Reference (230 genes)

Breast Cancer ER (196 genes)

Copy Number Variation (800 regions)

Single Cell Gene (800 genes)

IncRNA quantification (up to 800)

ChIP-String assay (800 loci)

- http://www.uab.edu/medicine/radonc/en/nanostring
- http://www.nanostring.com/lifesciences

