

## **NSCLC Cancer research**

## Study Purpose

This study was performed in a cohort of 8 NSCLC samples. Segmentation markers CD298 and B2M, along with PanCK, CD68 and CD45 were co-detected with the CosMx Human Universal Cell Characterization RNA panel on a ~150 mm² of tissue area. Semisupervised clustering was used to identify and map immune cell types in the tumors. Marker expression, UMAP, and physical representation of a sample is shown below. Tumor cell nests were classified based on cell proportions within a given radius. By classifying both the tumor and stromal neighborhoods, differential gene expression near or far from the tumor was analyzed in unique immune subsets. SPP1 was found to be significantly (FDR < 0.01) enriched near the tumor while SPP1macrophages were farther from the tumor itself.

Study Summary	
Tissue Type	FFPE Lung Cancer
Panel	1000-plex Human RNA Universal Cell Characterization
Segmentation Markers	CD68, CD45, DAPI
Total tissue area analyzed	~150 mm²
Cells analyzed	766,313
% Cells passed QC	96 %
Number of Genes detected above background	79%
% of transcripts assigned a cell	265

## RNA marker expression **UMAP**

Tumor microenvironment niche classification

SPP1 +/- Macrophage distribution

SPP1+ Macrophage SPP1- Macrophage

## For more information, please visit nanostring.com/CosMx

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