Development of a Quantitative Immunofluorescence Imaging Assay to Assess β-catenin Translocation and Multiplex Biomarkers for Epithelial-Mesenchymal Transition (EMT) in Tumor Tissues

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Abstract # 1500

Background

Quantitative immunofluorescence allows for imaging and analysis of cell surface and cytoplasmic markers to identify and measure expression changes in cellular processes at the subcellular level. We have developed an imaging assay that integrates multiple changes in EMT via an immunofluorescence multiplex approach to describe the progression of EMT in normal and cancerous cells.

Methods

We have developed a quantitative imaging assay that integrates multiple changes in EMT biomarkers in normal and cancerous cells. The assay was performed on cell lines treated with EMT inducers in vivo and in vitro, determined from images segmented with Tissue Studio software. Transfer full-color images with or without imaging software to Tissue Studio software to obtain total mean integrated signal per positive control for endogenous biomarker expression in tissues. Image segmentation and quantitative multiplex analysis were performed using Tissue Studio software.

Results

We have developed an imaging assay that integrates multiple changes in EMT biomarkers in normal and cancerous cells in vivo and in vitro, determined from images segmented with Tissue Studio software. Transfer full-color images with or without imaging software to Tissue Studio software to obtain total mean integrated signal per positive control for endogenous biomarker expression in tissues. Image segmentation and quantitative multiplex analysis were performed using Tissue Studio software.

Conclusions

We have developed a quantitative imaging assay that integrates multiple changes in EMT biomarkers in normal and cancerous cells in vivo and in vitro, determined from images segmented with Tissue Studio software. Transfer full-color images with or without imaging software to Tissue Studio software to obtain total mean integrated signal per positive control for endogenous biomarker expression in tissues. Image segmentation and quantitative multiplex analysis were performed using Tissue Studio software.

Supporting Information

EMT Multiplex IA Assay/Panel

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