Quantifying cell subsets and heterogeneity in living cultures using real-time live-cell analysis

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Summary & Impact

- Heterogeneity exists in all cellular populations, ranging from the cell type present to differences at the genetic level or stage of the cell cycle. This heterogeneity plays an important role in how populations react in response to therapeutics and biological stimuli.
- To date, IncuCyte® analysis has been solely based on population-averaged measures whereby object (cell) data is consolidated into an aggregate metric.
- However, effects on populations can sometimes be masked by larger numbers of non-responsive or similar-sized populations may produce opposite responses that result in a net zero result.

Analysis of cell cycle using live-cell analysis

Phenotyping of HER2 expression, to show heterogeneity

Monitoring PBMC activation: morphology & protein expression

Specific, non-perturbing fluorescent labeling

Label-free, accurate cell segmentation

Analysis of cell health: Population identification