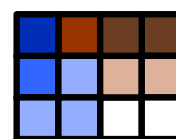
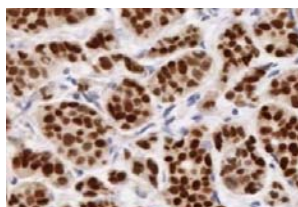




Topics in Image Analysis: Application-Based Algorithm Tuning

Image Analysis Illustrated

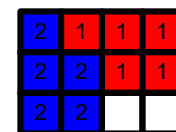
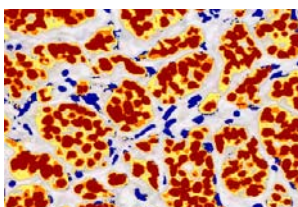
You use Stains to highlight Features
e.g. - Cell Compartments
(nuclei, membrane, cytoplasm)
- Protein expressions



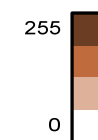
Multi-Color Images with
RGB Color Pixels
(Picture Elements)

Pixels of different Colors (Stains)

Where and how much staining is there?

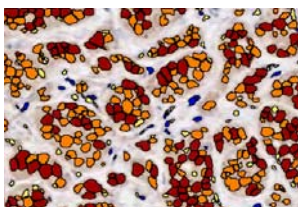


Classify Pixels
by Color (Stain)



Measure Pixel
(Stain) Intensities

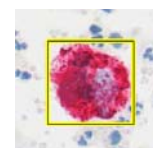
Where and how many objects are there?
e.g. - Tumor Cells



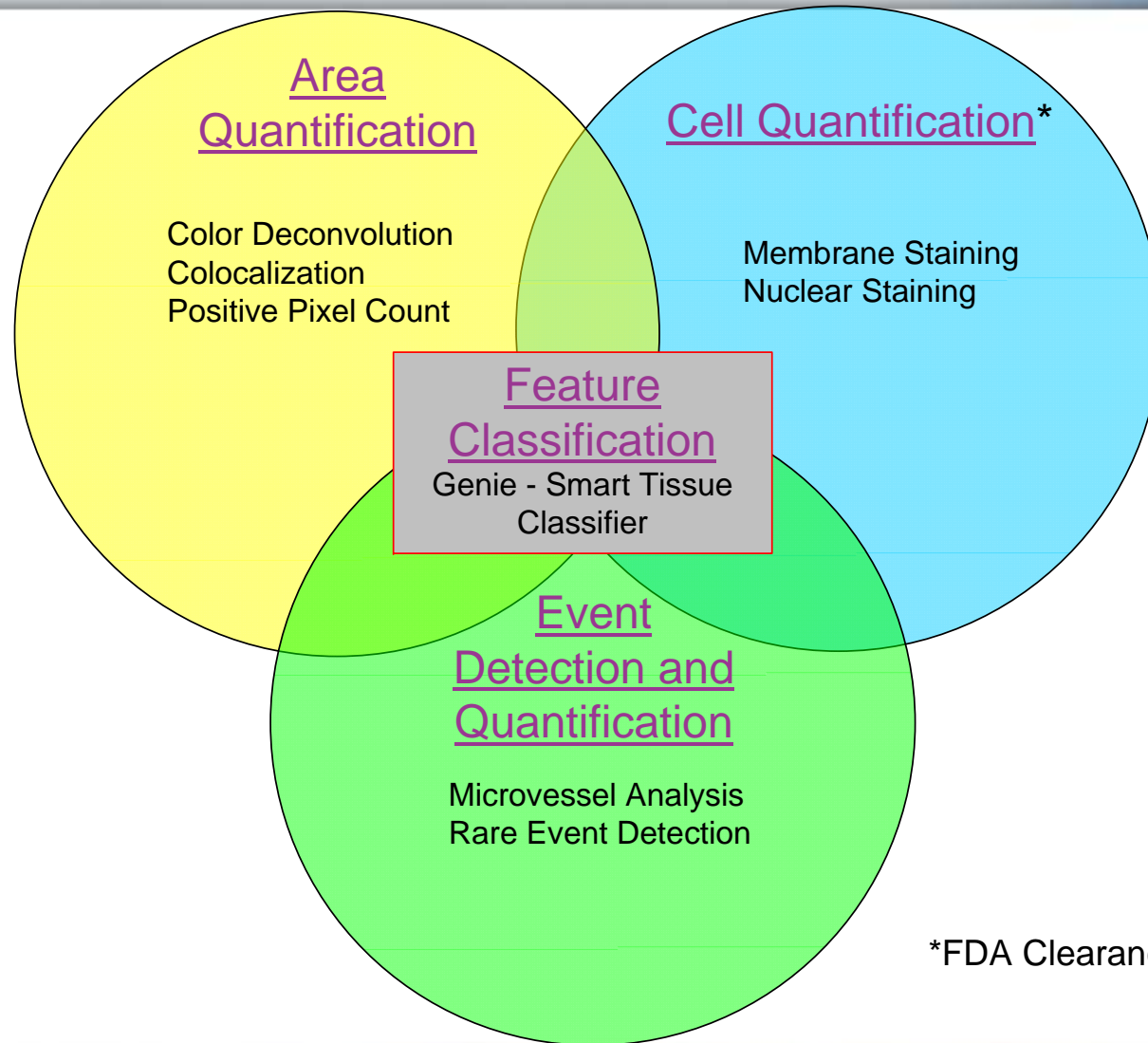
Identify Objects
by Color
Shape
Size

Measure Object
(Stain) Intensities

How much staining is there on different objects?
e.g. - Cell Compartments

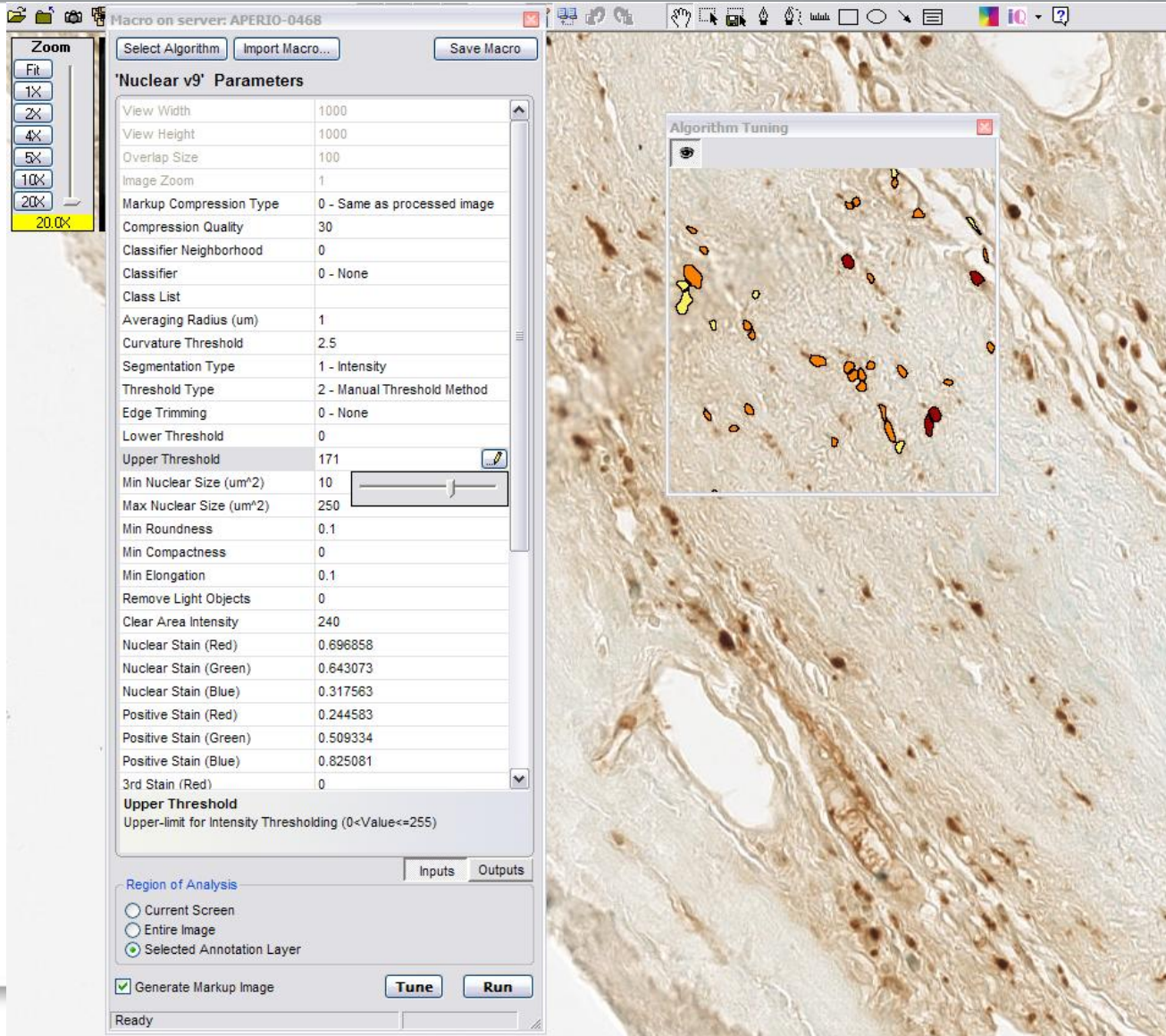


Aperio Image Analysis Capabilities



*FDA Clearance, Her2, ER, PR

Algorithm Tuning



- Real Time Feedback for Parameter changes
- Ensure Counting and Scoring is Accurate
- Simple “One-Click” Saving for Analysis Tool Macro