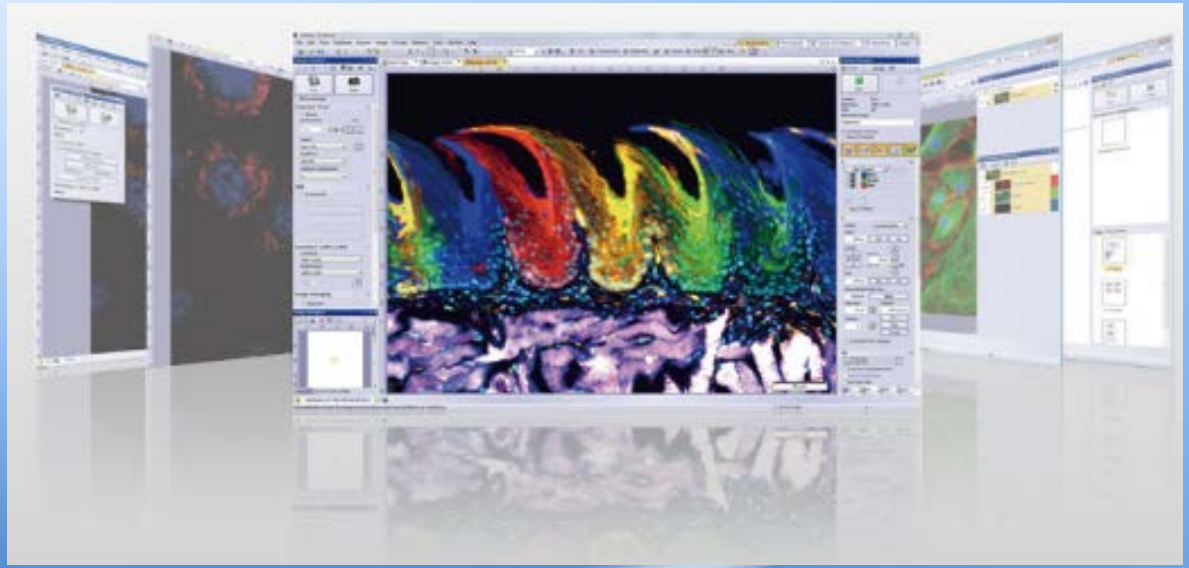
OLYMPUS

Sheng Le MBBS PhD

Product Manager

Olympus Australia

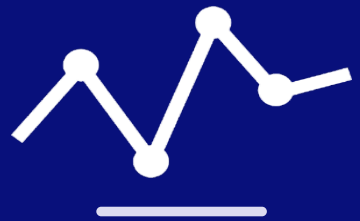


25th Jul 2019

WIMR

Dimension

cellSens



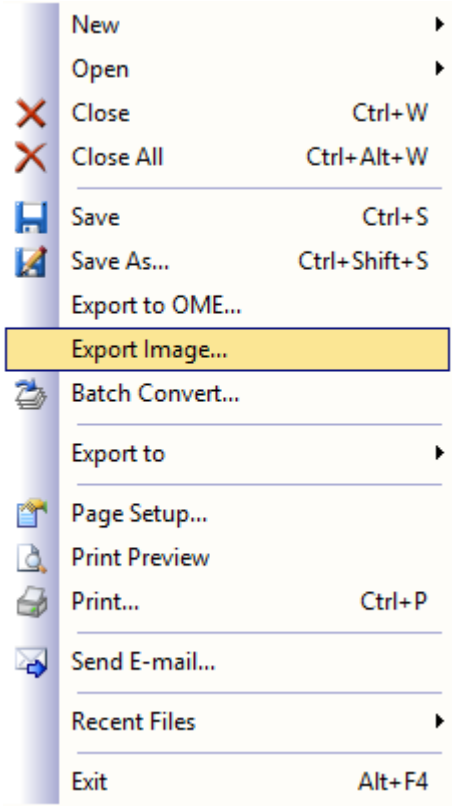
Understand parameters

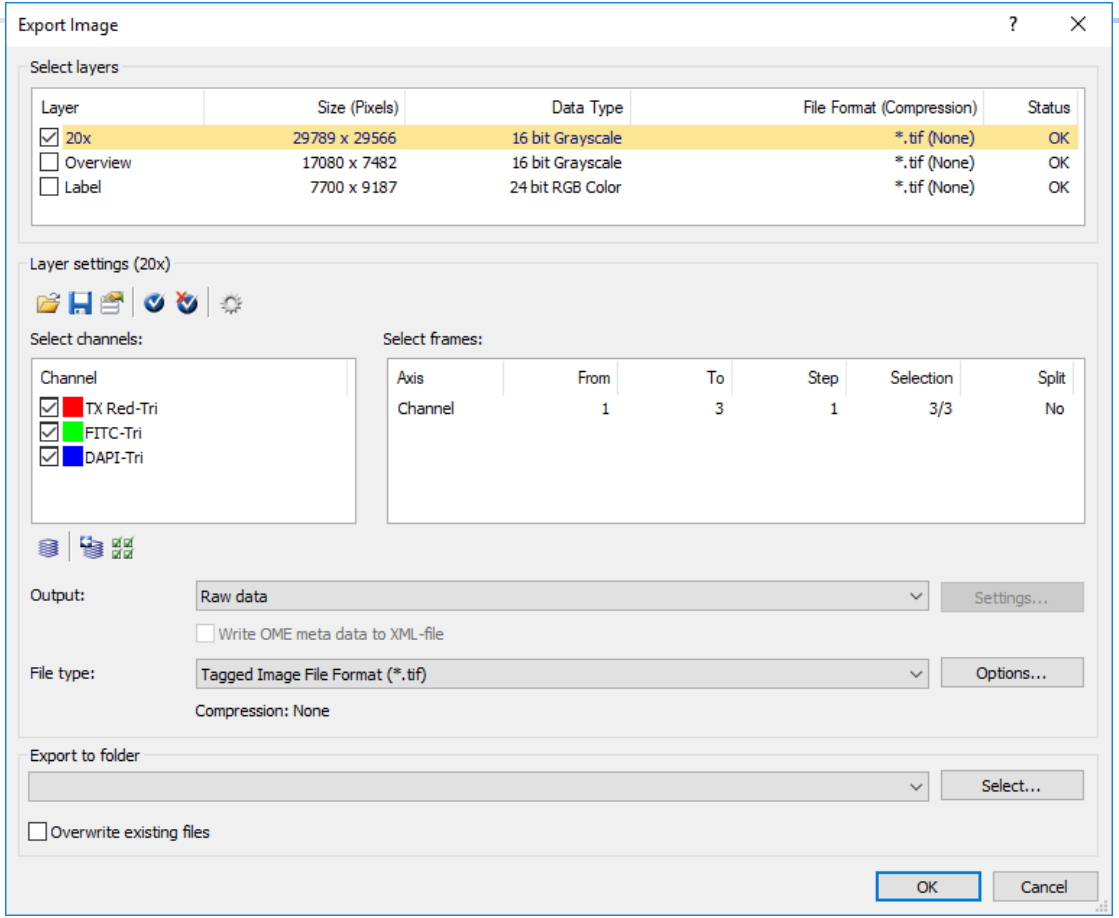
Structure and parameters of the images

- Formats (VSI, TIF, TIFF, JPEG…)
- Layers (multichannel image, over view, ROIs)
- Channels (FL,BF….)
- Colour (Colour image, monochrome image, pseudo colour)
- Intensity
- Resolution (dpi, ppi..)

Structure and parameters of the images

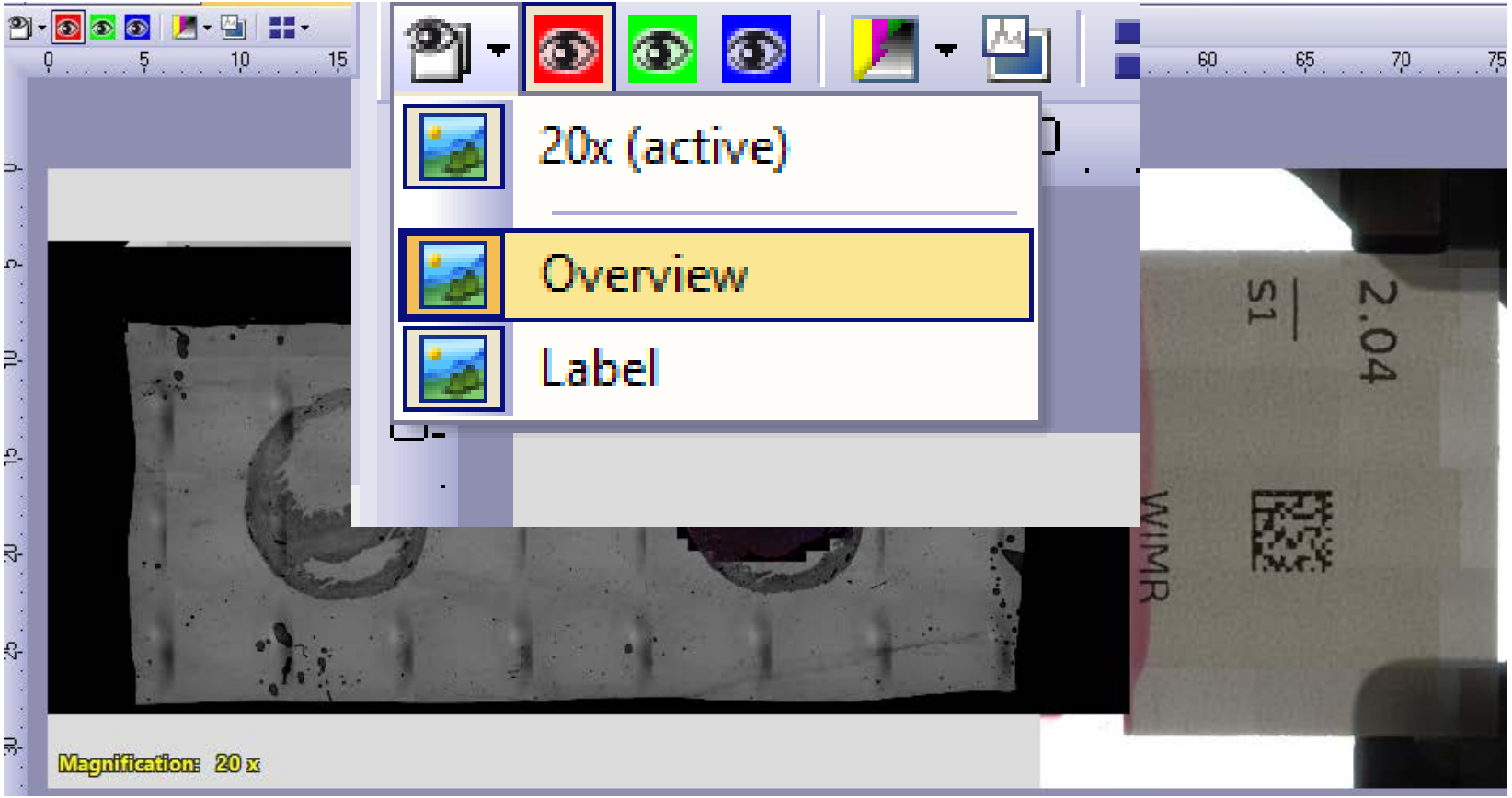
- Formats (VSI, TIF, TIFF, JPEG…)
- Layers (multichannel image, over view, ROIs)
- Channels (FL,BF….)
- Colour (Colour image, monochrome image, pseudo colour)
- Intensity
- Resolution (dpi, ppi..)


New
Open
Close Ctrl+W
Close All Ctrl+Alt+W
Save Ctrl+S
Save As... Ctrl+Shift+S
Export to OME...
Export Image...
Batch Convert...
Export to
Page Setup...
Print Preview
Print... Ctrl+P
Send E-mail...
Recent Files
Exit Alt+F4


Export Image
Select layers
Layer | Size (Pixels) | Data Type | File Format (Compression) | Status
20x | 29789 x 29566 | 16 bit Grayscale | *.tif (None) | OK
Overview | 17080 x 7482 | 16 bit Grayscale | *.tif (None) | OK
Label | 7700 x 9187 | 24 bit RGB Color | *.tif (None) | OK
Layer settings (20x)
Select channels:
Channel
TX Red-Tri
FITC-Tri
DAPI-Tri
Select frames:
Axis | From | To | Step | Selection | Split
Channel | 1 | 3 | 1 | 3/3 | No
Output: Raw data Settings...
Write OME meta data to XML-file
File type: Tagged Image File Format (*.tif) Options...
Compression: None
Export to folder
Select...
Overwrite existing files
OK
Cancel

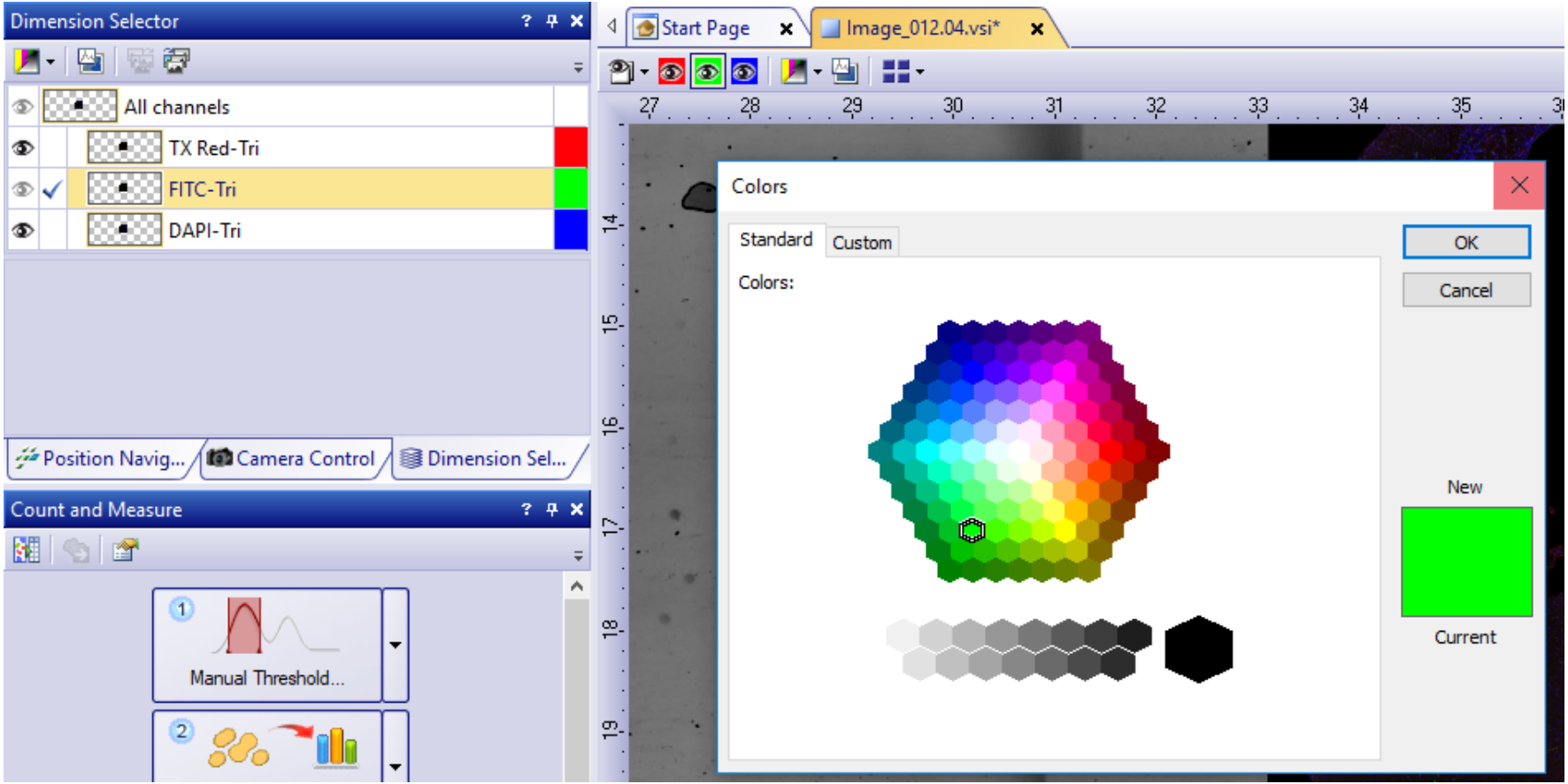
Structure and parameters of the images

- Formats (VSI, TIF, TIFF, JPEG…)
- Layers (multichannel image, over view, ROIs)
- Channels (FL,BF….)
- Colour (Colour image, monochrome image, pseudo colour)
- Intensity
- Resolution (dpi, ppi..)


20x (active)
Overview
Label
Magnification: 20 x
2.04
S1
WIMR

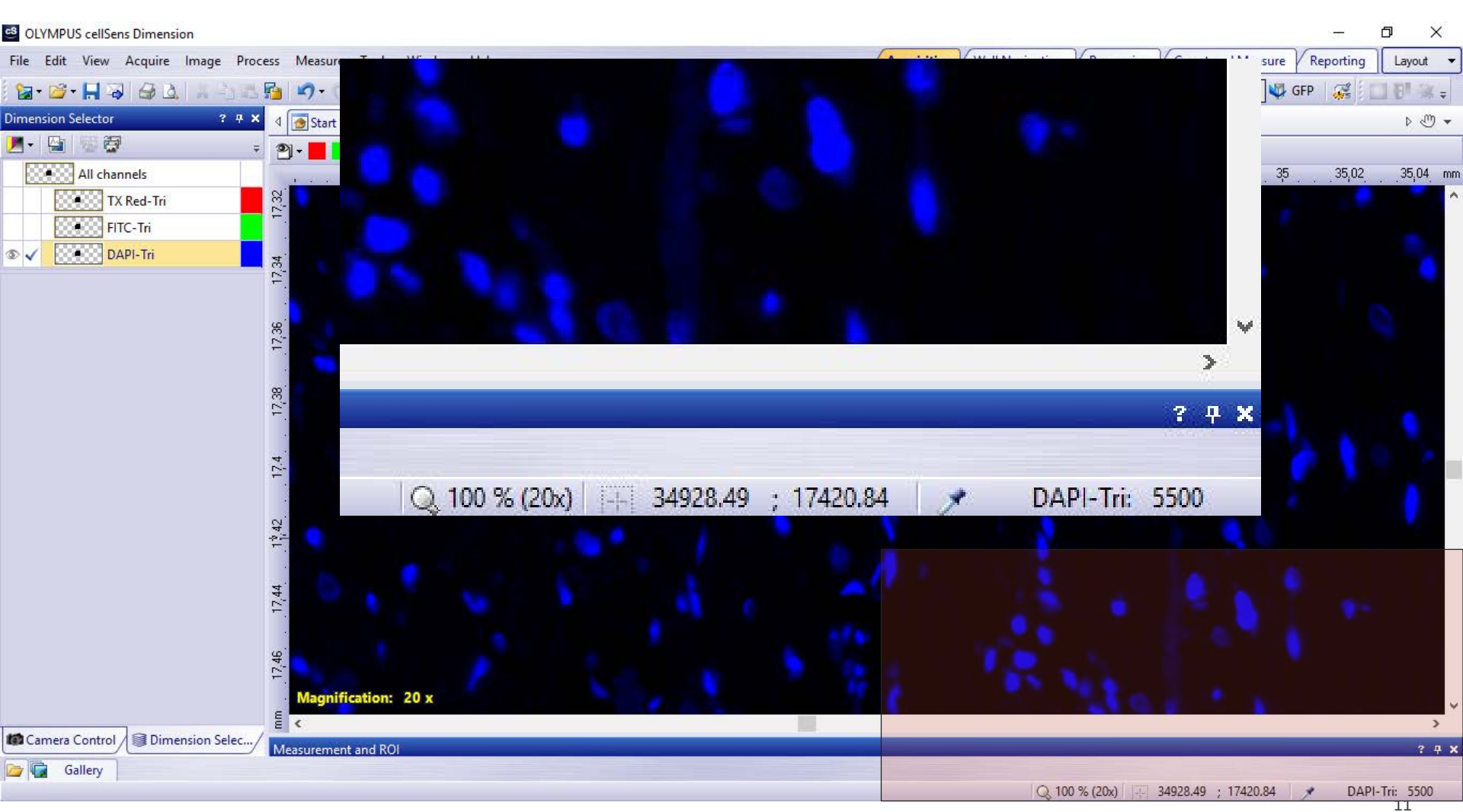
Structure and parameters of the images

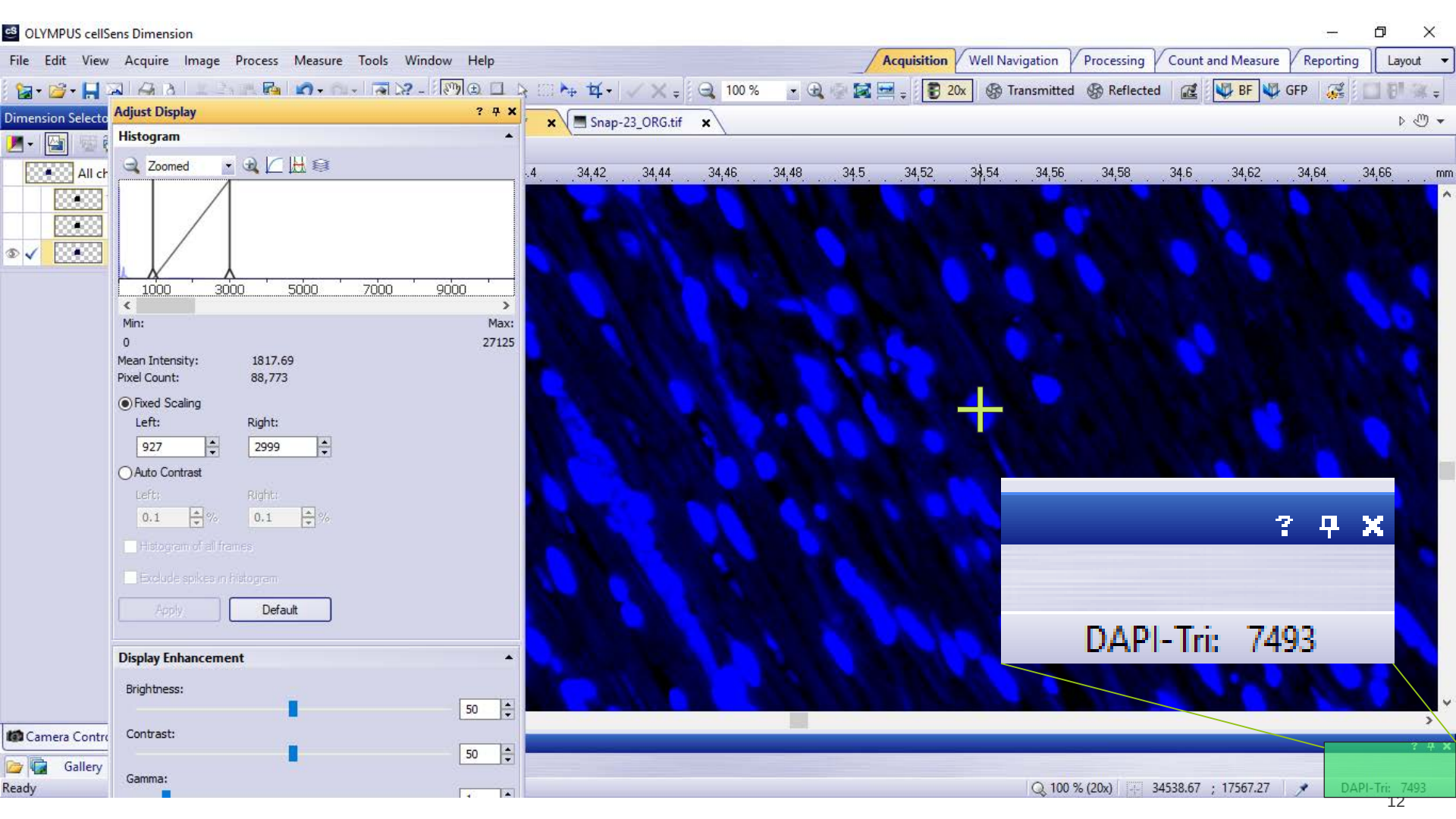
- Formats (VSI, TIF, TIFF, JPEG…)
- Layers (multichannel image, over view, ROIs)
- Channels (FL,BF….)
- Colour (Colour image, monochrome image, pseudo colour)
- Intensity
- Resolution (dpi, ppi..)

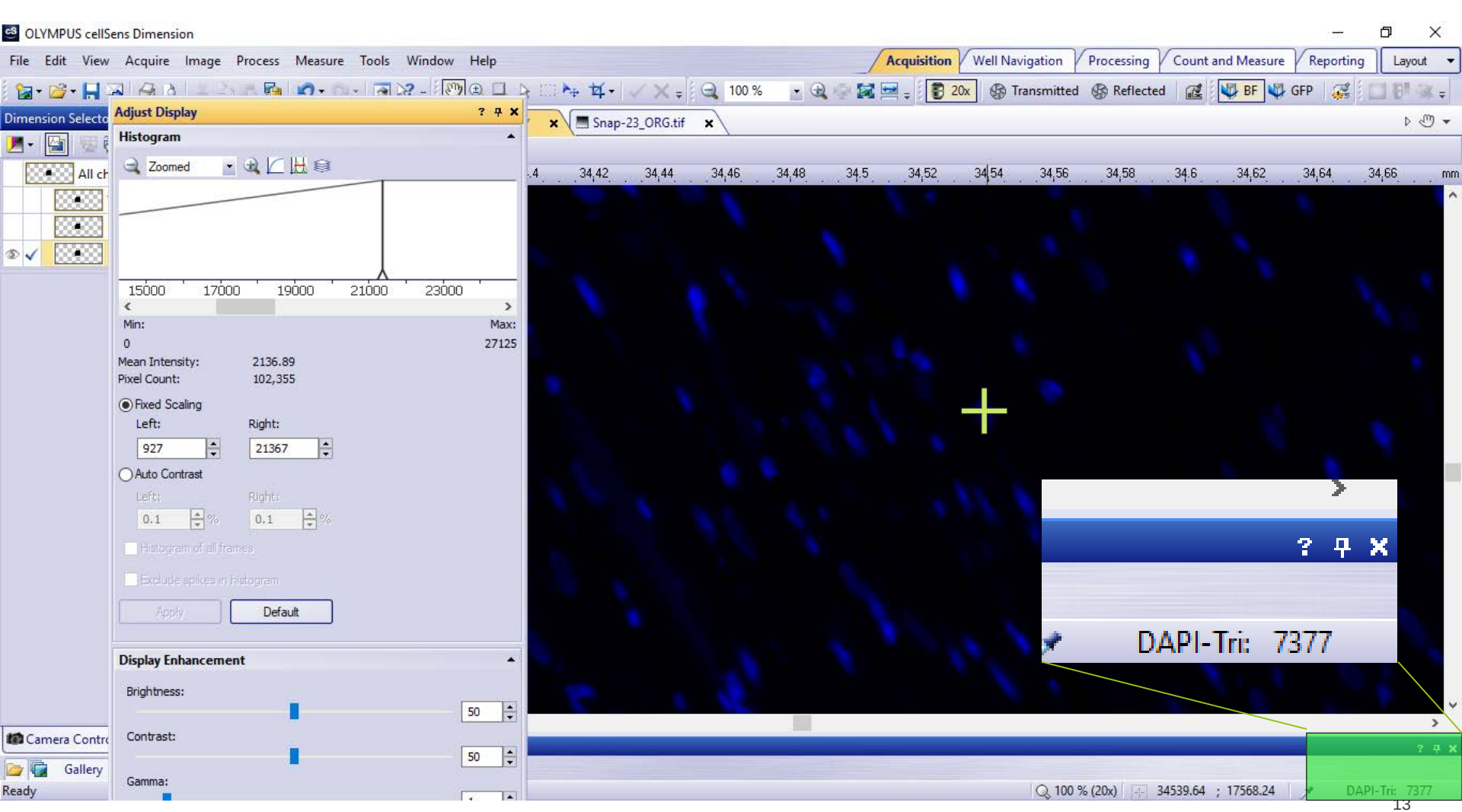

Dimension Selector
All channels
TX Red-Tri
FITC-Tri
DAPI-Tri
Position Navig...
Camera Control
Dimension Sel...
Count and Measure
Manual Threshold...
Start Page
Image_012.04.vsi*
Colors
Standard
Custom
Colors:
OK
Cancel
New
Current

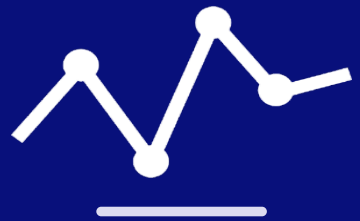
Structure and parameters of the images

- Formats (VSI, TIF, TIFF, JPEG…)
- Layers (multichannel image, over view, ROIs)
- Channels (FL,BF….)
- Colour (Colour image, monochrome image, pseudo colour)
- Intensity
- Resolution (dpi, ppi..)

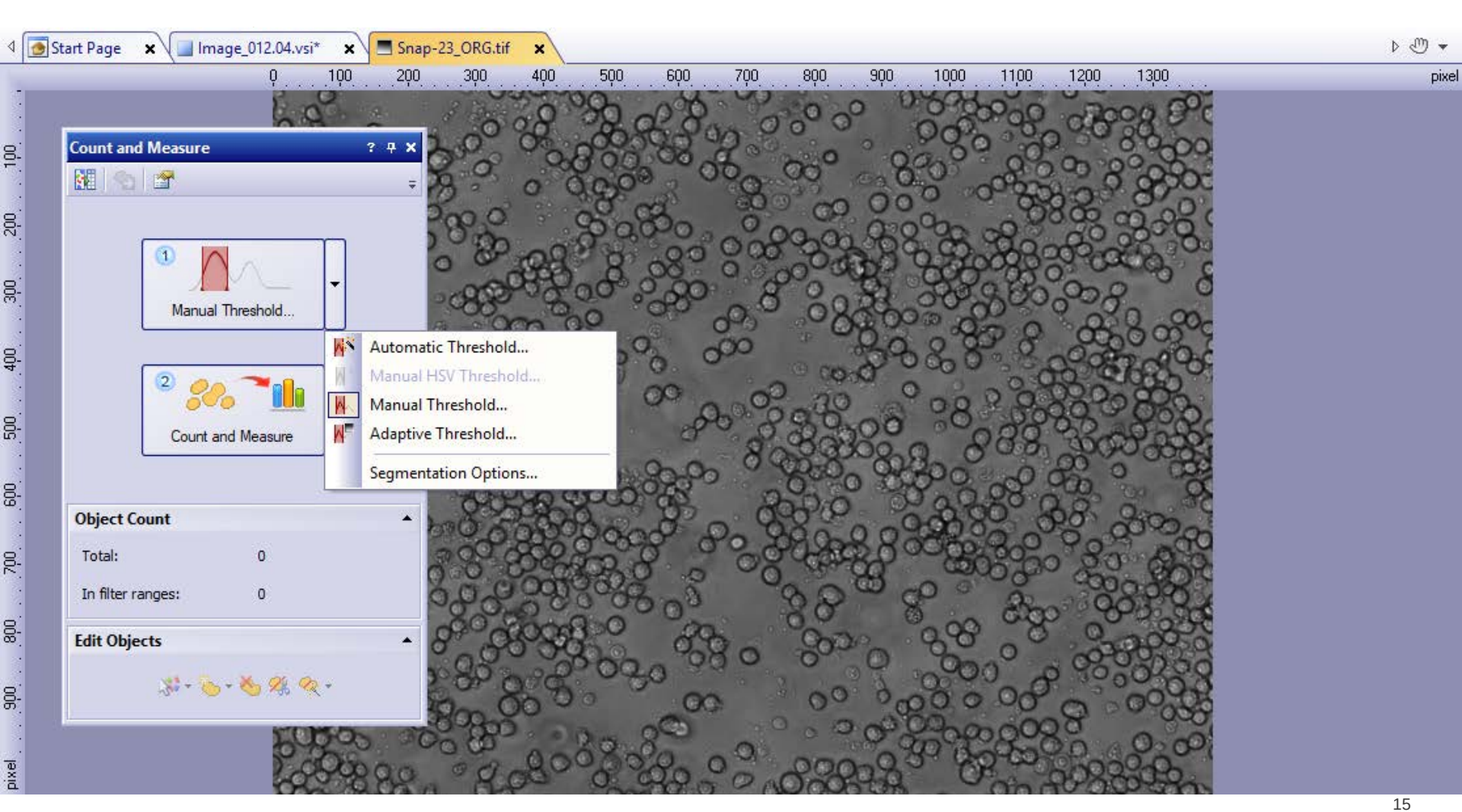

OLYMPUS cellSens Dimension
File Edit View Acquire Image Process Measure
Reporting
Layout
GFP
Dimension Selector
All channels
TX Red-Tri
FITC-Tri
DAPI-Tri
Start
35 35,02 35,04 mm
17,32 17,34 17,36 17,38 17,4 17,42 17,44 17,46 mm
100 % (20x) 34928.49 ; 17420.84 DAPI-Tri: 5500
Magnification: 20 x
Camera Control
Dimension Selec...
Gallery
Measurement and ROI
100 % (20x) 34928.49 ; 17420.84 DAPI-Tri: 5500


OLYMPUS cellSens Dimension
File Edit View Acquire Image Process Measure Tools Window Help
Acquisition
Well Navigation
Processing
Count and Measure
Reporting
Layout
Adjust Display
Histogram
Zoomed
1000 3000 5000 7000 9000
Min:
0
Max:
27125
Mean Intensity: 1817.69
Pixel Count: 88,773
Fixed Scaling
Left:
927
Right:
2999
Auto Contrast
Histogram of all frames
Exclude spikes in histogram
Apply
Default
Display Enhancement
Brightness:
50
Contrast:
50
Gamma:
Snap-23_ORG.tif
DAPI-Tri: 7493
Ready


OLYMPUS cellSens Dimension
File Edit View Acquire Image Process Measure Tools Window Help
Acquisition
Well Navigation
Processing
Count and Measure
Reporting
Layout
Adjust Display
Histogram
Zoomed
15000 17000 19000 21000 23000
Min:
0
Max:
27125
Mean Intensity: 2136.89
Pixel Count: 102,355
Fixed Scaling
Left:
927
Right:
21367
Auto Contrast
Histogram of all frames
Exclude spikes in histogram
Apply
Default
Display Enhancement
Brightness:
50
Contrast:
50
Gamma:
Snap-23_ORG.tif
DAPI-Tri: 7377
100 % (20x)
34539.64 ; 17568.24
Ready



Strategies to analyze your image


Start Page
Image_012.04.vsi*
Snap-23_ORG.tif
pixel
Count and Measure
1
Manual Threshold...
2
Count and Measure
Automatic Threshold...
Manual HSV Threshold...
Manual Threshold...
Adaptive Threshold...
Segmentation Options...
Object Count
Total: 0
In filter ranges: 0
Edit Objects

OLYMPUS cellSens Dimension

File Edit View Acquire Image Process Measure Tools Window Help

Acquisition | Well Navigation | Processing | Count and Measure | Reporting | Layout

Dimension Selector

Gray

Start Page | Image_012.04.vsi*

Count and Measure

Manual Threshold...

Count and Measure

Object Count

Total: 0

In filter ranges: 0

Edit Objects

Measurement and ROI

Camera Control | Dimension Selec... | Gallery

Ready

OLYMPUS cellSens Dimension Online Help

Hide Back Forward Home Print

Contents Index Search

Type in the keyword to find:

threshold

List Topics

Select Topic to display:

- Adaptive threshold values for gray-value images
- Adaptive threshold values for RGB images
- Adjusting the isovalue
- Adjusting the opacity curve
- Automatic threshold value for gray-value images
- Automatic threshold values for RGB images
- Blending settings
- Carrying out a Ratio Analysis
- Carrying out an automatic image analysis
- Carrying out an automatic image analysis on ROIs
- Carrying out an intensity adjustment
- Confluency Checker - Calibration - Calibration settings
- Confluency Checker - Calibration - Cell Size
- Confluency Checker - Calibration - Confluency
- Confluency Checker - Calibration - Count: Threshold
- Define Detection Options - Segmentation
- Dialog box - Automatic Threshold Comput
- Dialog box - Colocalization
- Dialog box - FRAP Analysis
- Dialog box - FRET Analysis
- Dialog box - Ratio Analysis
- Dialog box - Ratio Analysis
- EFI Processing - Advanced Settings
- Enhancing the segmentation

WIMR WORKSHOP 2019.pptx - PowerPoint

WIMR WORKSHOP 2019.pptx...

See also

Carrying out an automatic image analysis

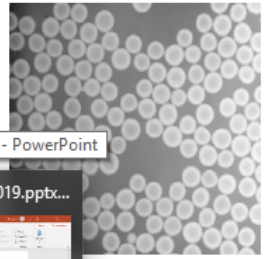
Carrying out an intensity adjustment

(1) Intensity adaptation

The *Adaptive Threshold* dialog box, enables you to process the image before the threshold values are set. You define this preprocessing, in the *Intensity adaptation* group.

What is an intensity adjustment?

When an intensity adjustment is carried out, the different intensities in the image are mutually adjusted. To do this, the mean intensity of the adjoining pixels is determined for each pixel. This mean intensity is then subtracted from the pixel's intensity. When, for instance, the image shows light objects against a dark background, the equally light objects will also appear equally light, after the correction has taken place.



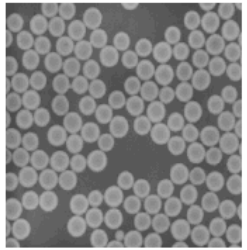
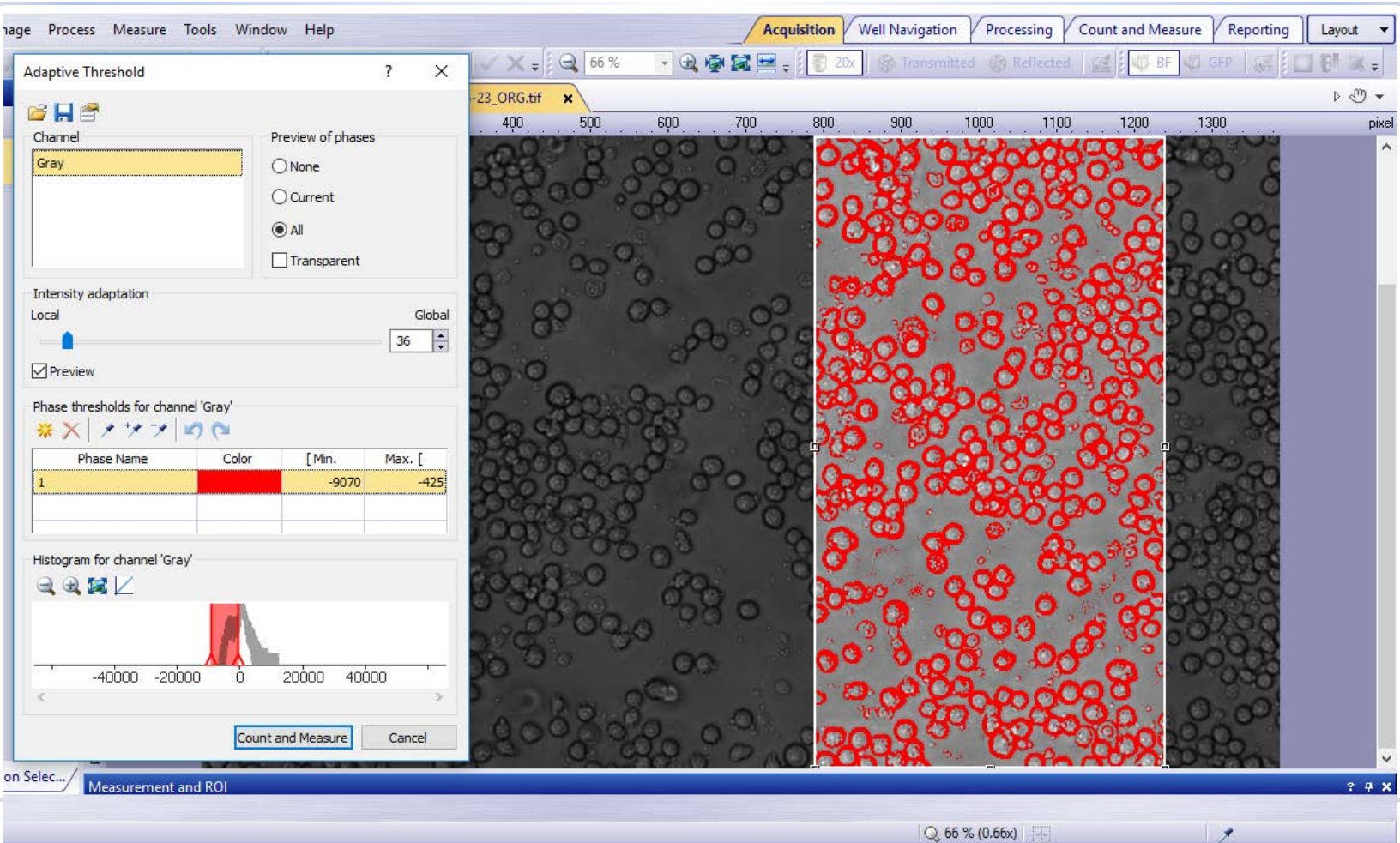
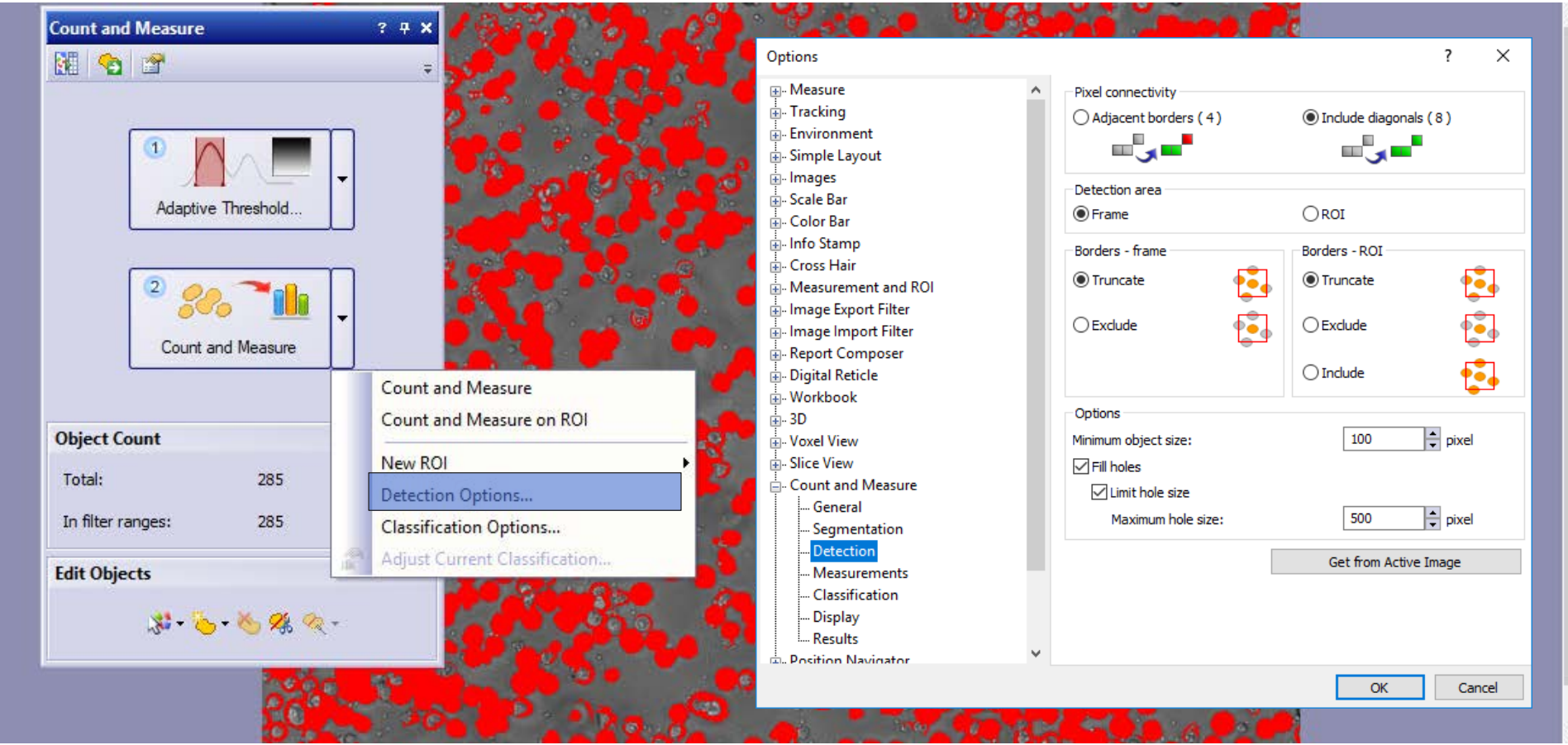
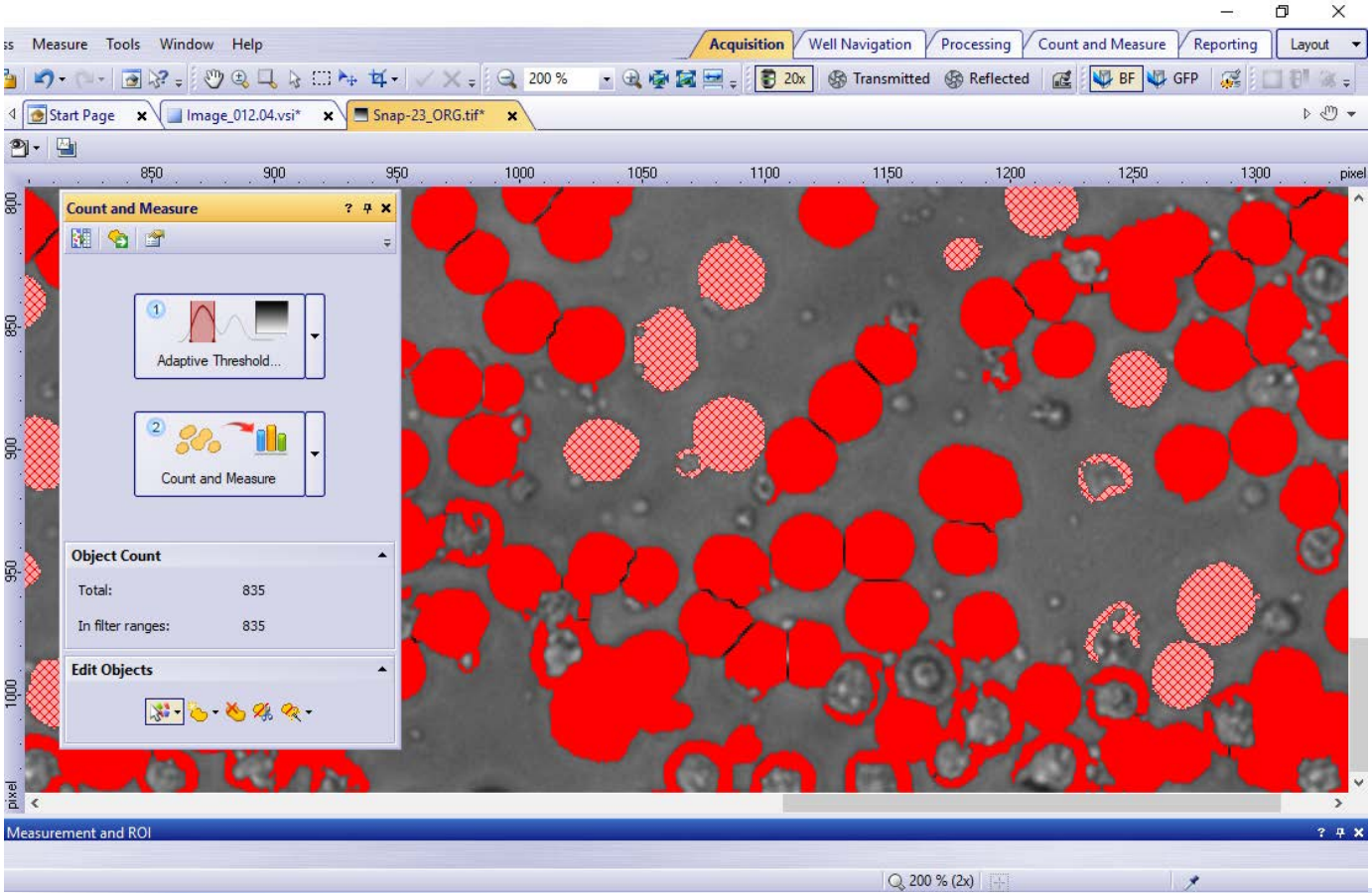


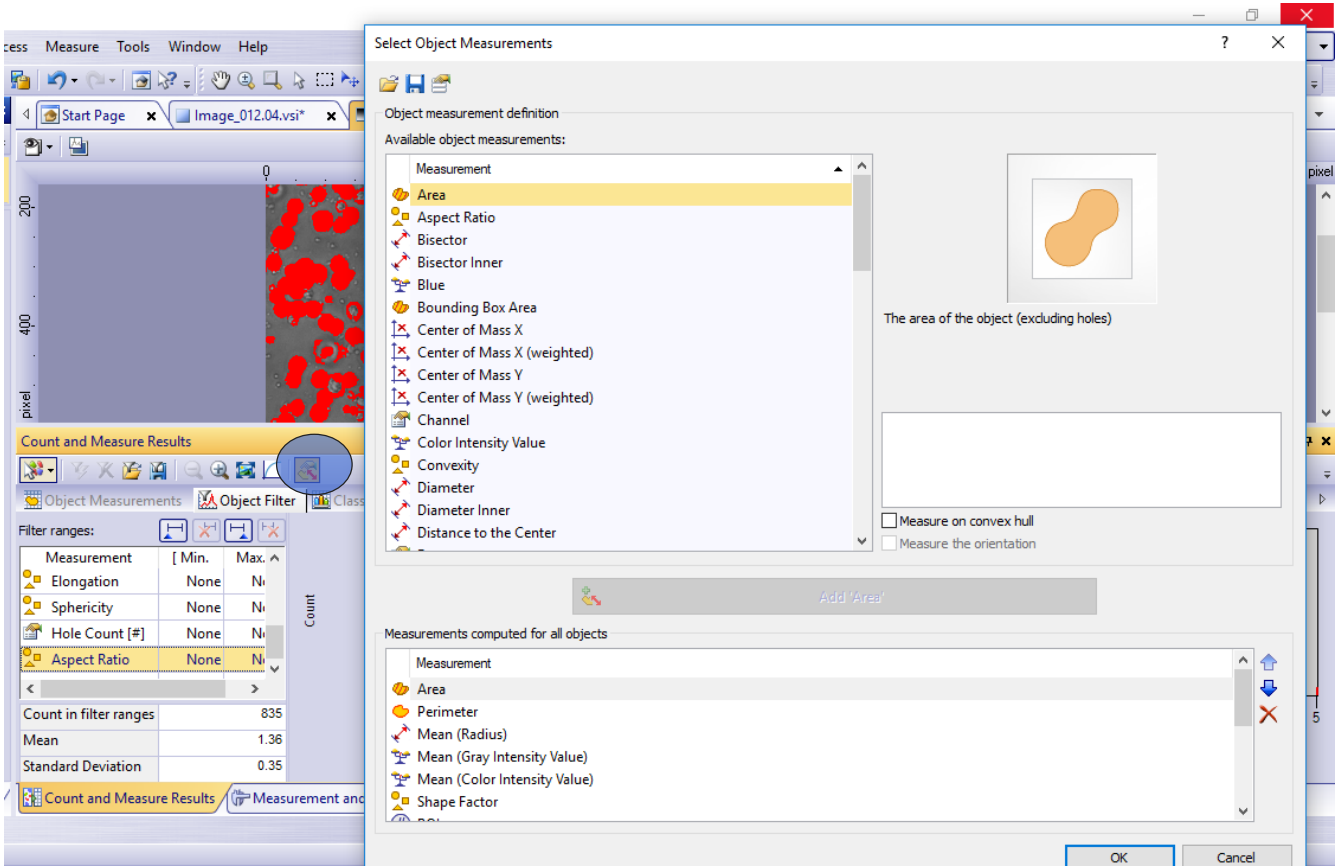
image before the intensity adjustment.
When the intensity adjustment has been carried out, the objects
qually light.


Process
Measure
Tools
Window
Help
Acquisition
Well Navigation
Processing
Count and Measure
Reporting
Layout
Adaptive Threshold
Channel
Gray
Preview of phases
None
Current
All
Transparent
Intensity adaptation
Local
Global
36
Preview
Phase thresholds for channel 'Gray'
Phase Name
Color
[Min.
Max. [
1
-9070
-425
Histogram for channel 'Gray'
-40000
-20000
0
20000
40000
Count and Measure
Cancel
-23_ORG.tif
400
500
600
700
800
900
1000
1100
1200
1300
pixel
Measurement and ROI
66 % (0.66x)


Count and Measure
1
Adaptive Threshold...
2
Count and Measure
Object Count
Total: 285
In filter ranges: 285
Edit Objects
Count and Measure
Count and Measure on ROI
New ROI
Detection Options...
Classification Options...
Adjust Current Classification...
Options
Measure
Tracking
Environment
Simple Layout
Images
Scale Bar
Color Bar
Info Stamp
Cross Hair
Measurement and ROI
Image Export Filter
Image Import Filter
Report Composer
Digital Reticle
Workbook
3D
Voxel View
Slice View
Count and Measure
General
Segmentation
Detection
Measurements
Classification
Display
Results
Position Navigator
Pixel connectivity
Adjacent borders (4)
Include diagonals (8)
Detection area
Frame
ROI
Borders - frame
Truncate
Exclude
Borders - ROI
Truncate
Exclude
Include
Options
Minimum object size:
100
pixel
Fill holes
Limit hole size
Maximum hole size:
500
pixel
Get from Active Image
OK
Cancel

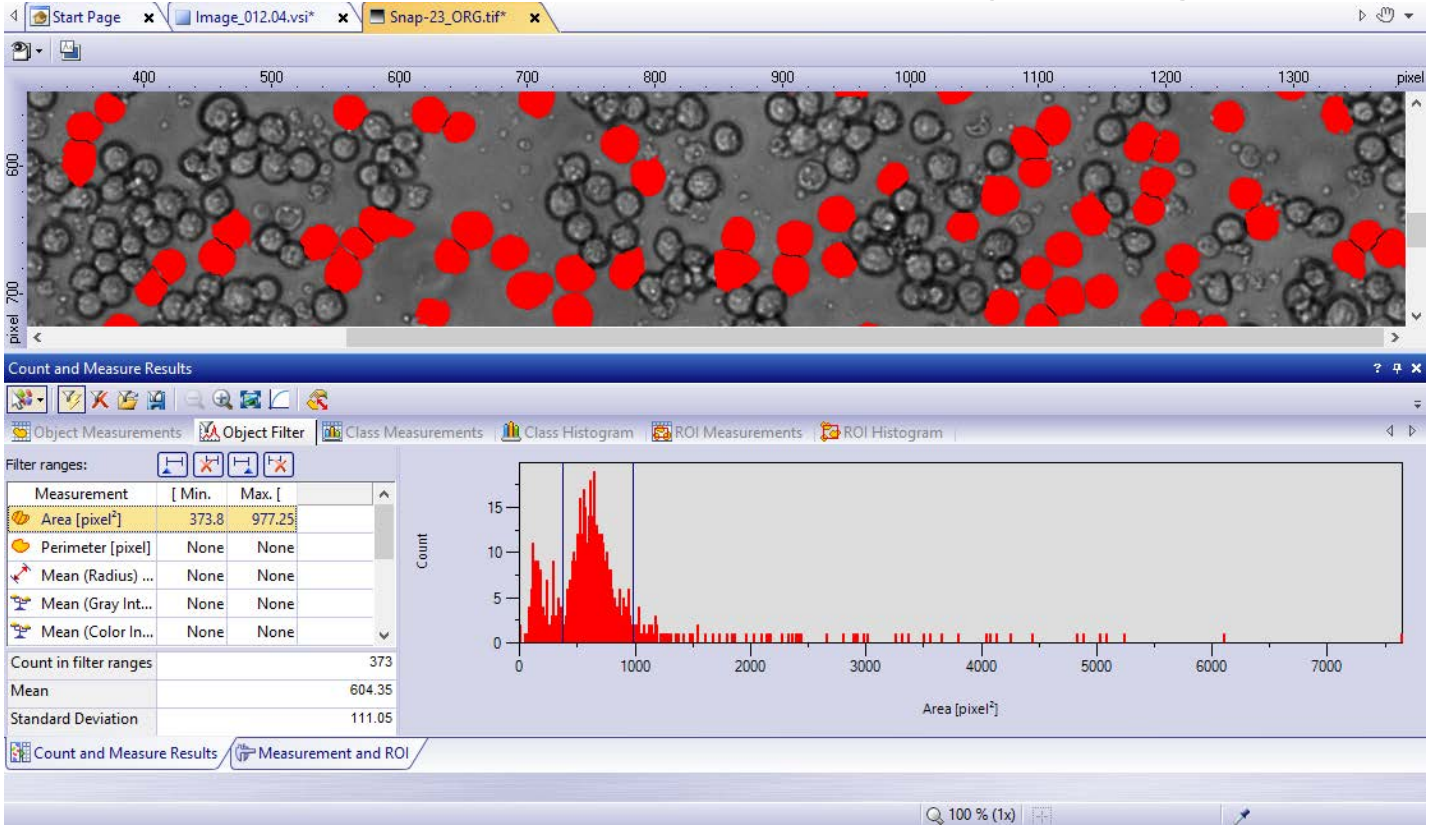


Auto split (Watershed)

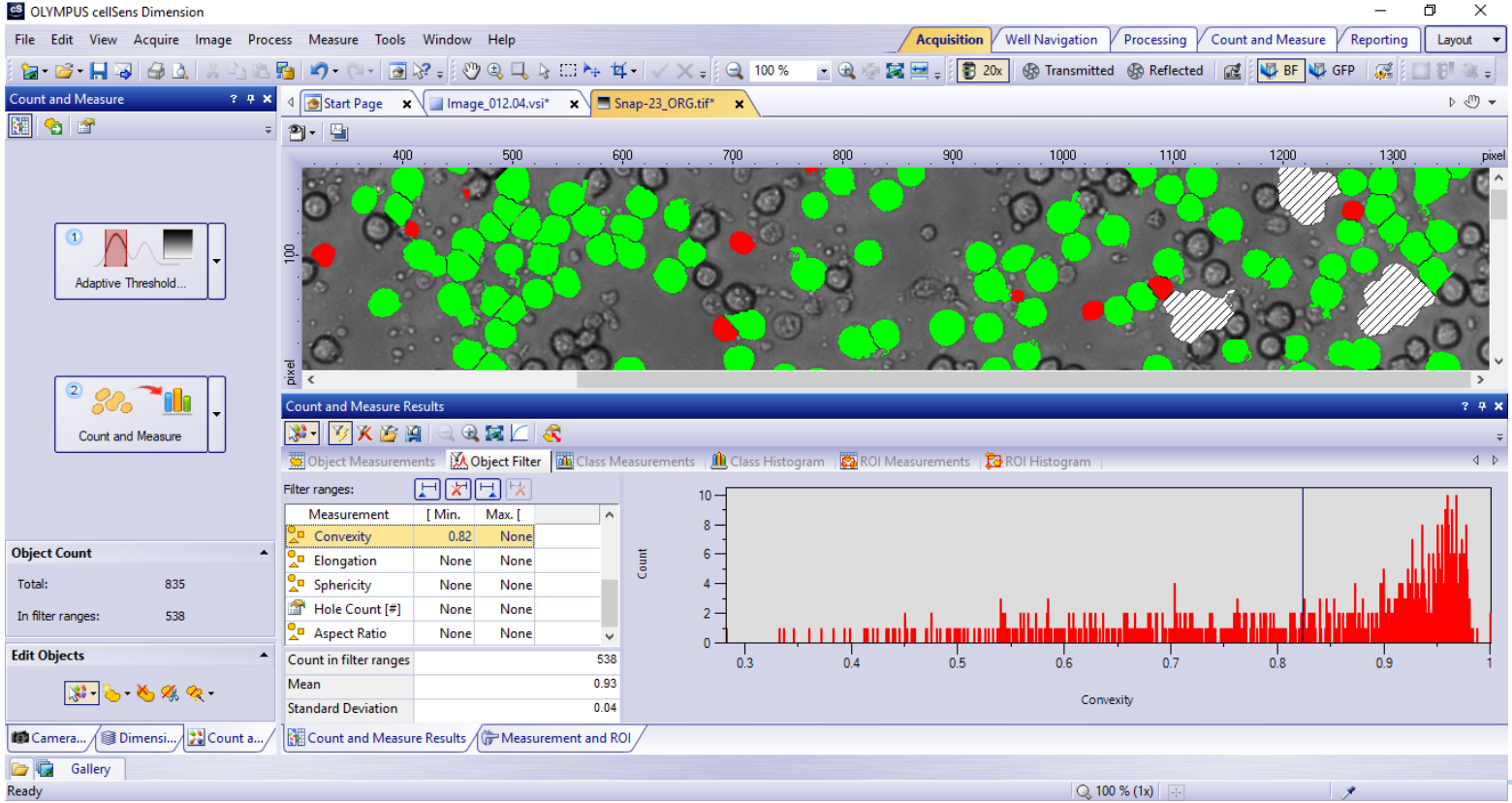


Select your parameters

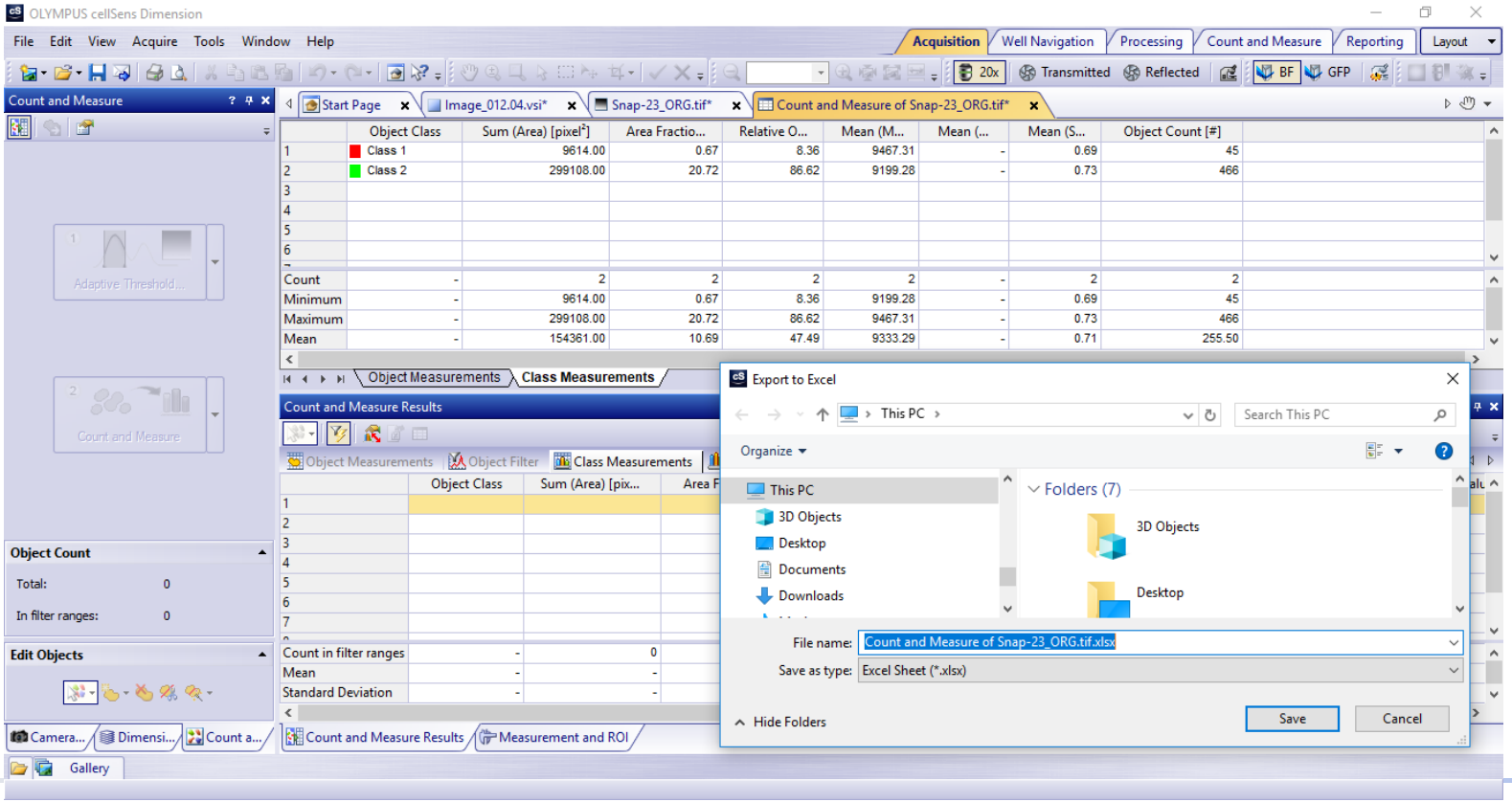
Use filters to narrow down your target

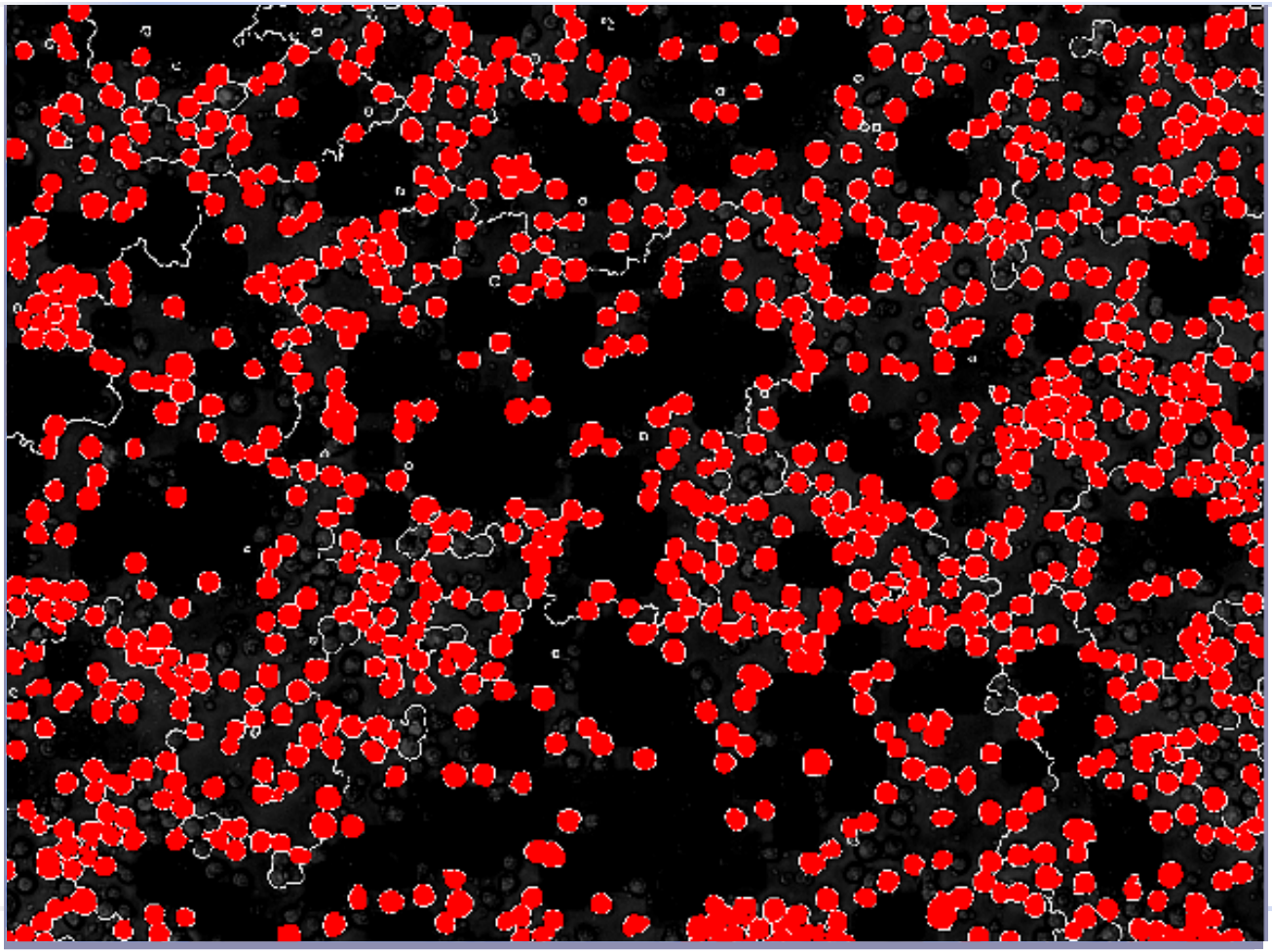


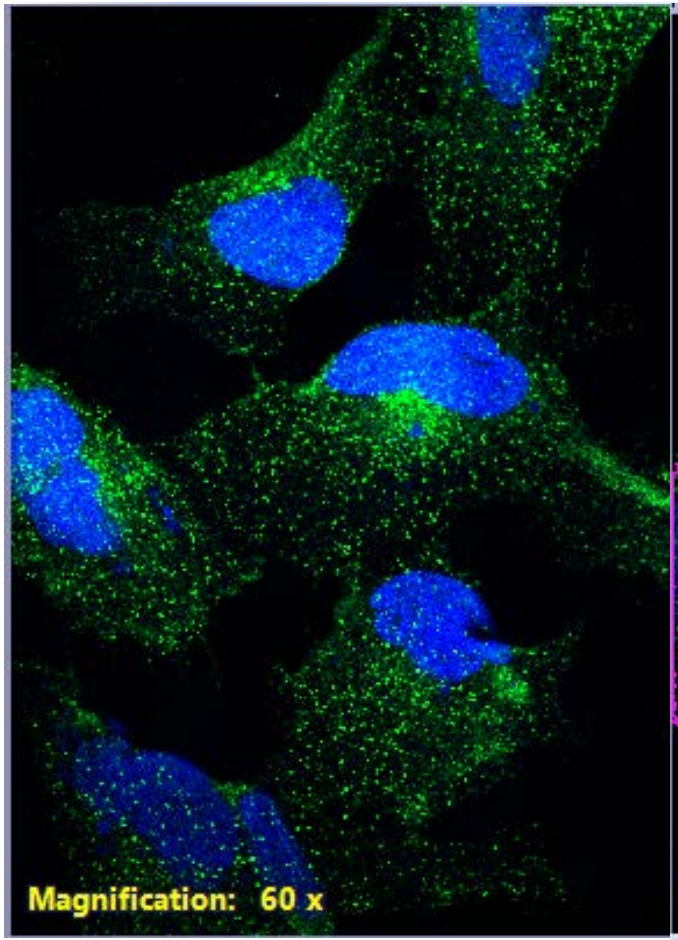
Set Classification

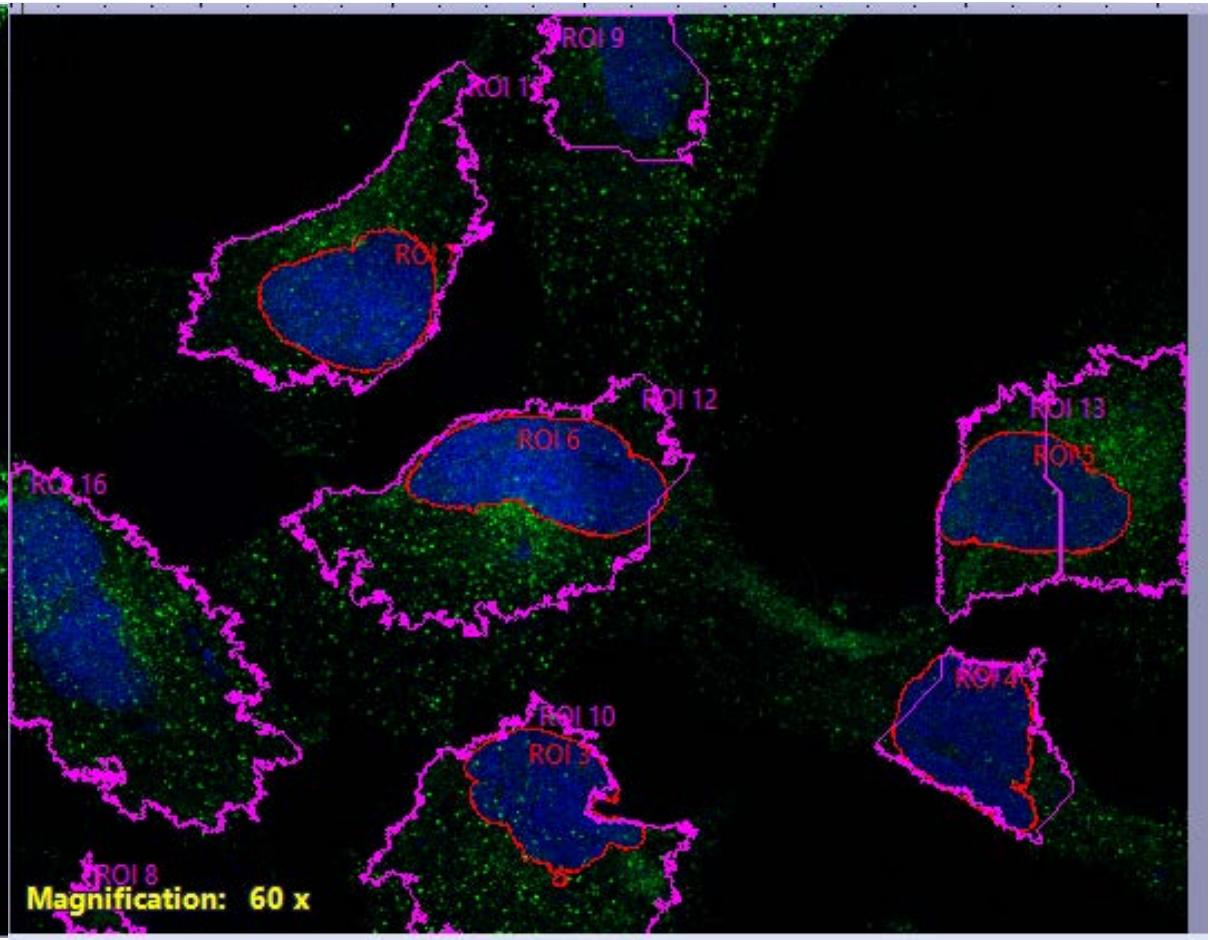


View and export your data






Magnification: 60 x


ROI 9
ROI 12
ROI 6
ROI 13
ROI 5
ROI 16
ROI 10
ROI 8
Magnification: 60 x

Thank you.