ADCI Process Queue

ADCI software processes samples using a queue system within which one sample is processed at a time. To add a sample to the process queue, highlight an unprocessed sample within the main GUI and click the 🔍 icon. Items in the process queue can be processed individually by highlighting an item in the process queue and clicking the ▶ icon. All items currently in the process queue can be processed sequentially in one click by clicking the ▶ icon.

Note in the event of an unexpected shutdown of the software while multiple samples are being processed in the queue, some completed samples may be recoverable. Consult the sample recovery page for more information.

What processing does
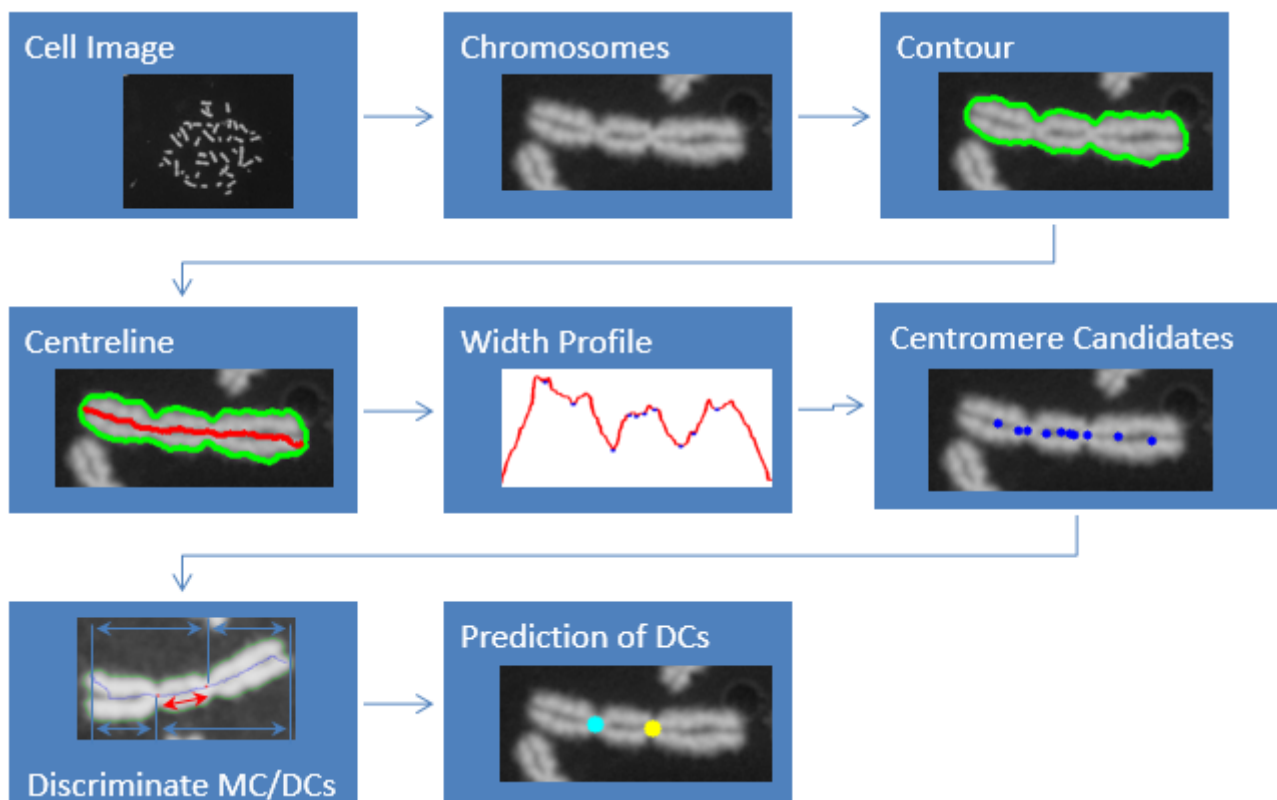
The main goal of processing is to locate and count DCs within all images in a sample at all available SVM Sigma values. This is accomplished through the steps shown in the above image. To discover more about any of these processing steps, consult the ADCI and underlying algorithm references page. Color-coded contours generated in processing steps can be seen within the metaphase image viewer. DC counts and DC frequency across all SVM Sigma values can be viewed by highlighting a processed sample in the main GUI and consulting the console.

What processing does not do

After processing, active false positive filters are applied and can be changed in real-time without any need to process the sample again. These filters examine chromosomes seemed to be dicentric during processing and "downgrade" DCs to MCs if they meet the threshold of any active false positive filter. Consult the false positive filters page for a detailed description of each filter and their function.

All images in a sample are examined during processing steps. Image selection models can be applied to processed samples to exclude undesirable images from calibration curve generation and dose estimation calculations. This is not done automatically during processing. Image selection models are applied later either within the metaphase image viewer, calibration curve wizard, or dose estimation wizard.

Estimated time necessary to process a sample

ADCI can process a 1280×1024 image in approximately 2 seconds and a 912×732 image in approximately 1 second. Extending these estimates to moderately sized samples, a sample containing 1000 1280×1024 images will require approximately 33 minutes to complete processing steps, while a sample containing 1000 912×732 images will require approximately 17 minutes. To view more extensive runtime data, consult the sample processing benchmarks page.