**spot\_distance\_cutoff**: max distance between for 2 spots to be considered 1

**nucl\_id\_med\_filter\_size**: size of median filter to apply prior to nucleus detection

**nucl\_id\_watershed** 0/1: use watershed to separate touching nuclei

**nucl\_id\_ws\_gauss\_sigma**: stdev for gaussian kernel, gauss filter is applied to distance transform prior to watershed

**nucli\_id\_ws\_min\_dist**: peaks in the distance map must be at least this distance away (if closer, only larger peak will be kept)

**nucl\_id\_th:** thresholding algorithm to define nucleus objects (e.g. “otsu)

**nucl\_id\_min\_solidity**: minimum solidity to be included as a nuclei (otherwise object is discarded for the analysis)

**nucl\_id\_min\_area**: minimum area of nuclei, objects smaller will be discarded

**nucl\_id\_max\_area**: maximum area of nuclei, objects larger will be discarded

**blob\_min\_sigma**: min. stdev for gaussian kernel. keep low to detect smaller blobs

**blob\_max\_sigma**: max. "

**blob\_num\_sigma**: number of intermediate values of stdev to consider

**blob\_th**: intensity threshold, local maxima smaller than thresh are ignored. Reduce this to detect blobs with less intensities.

**blob\_overlap** (0-1): if area of 2 blobs overlaps by a fraction greater than this threshold, the smaller blob is eliminated

**white\_tophat** 0/1: apply white tophat - returns the bright spots of an image that are smaller than the structuring element

**tophat\_disk\_size**: structuring element is a disk, specify size here