

Autodisector –automation of the physical disector

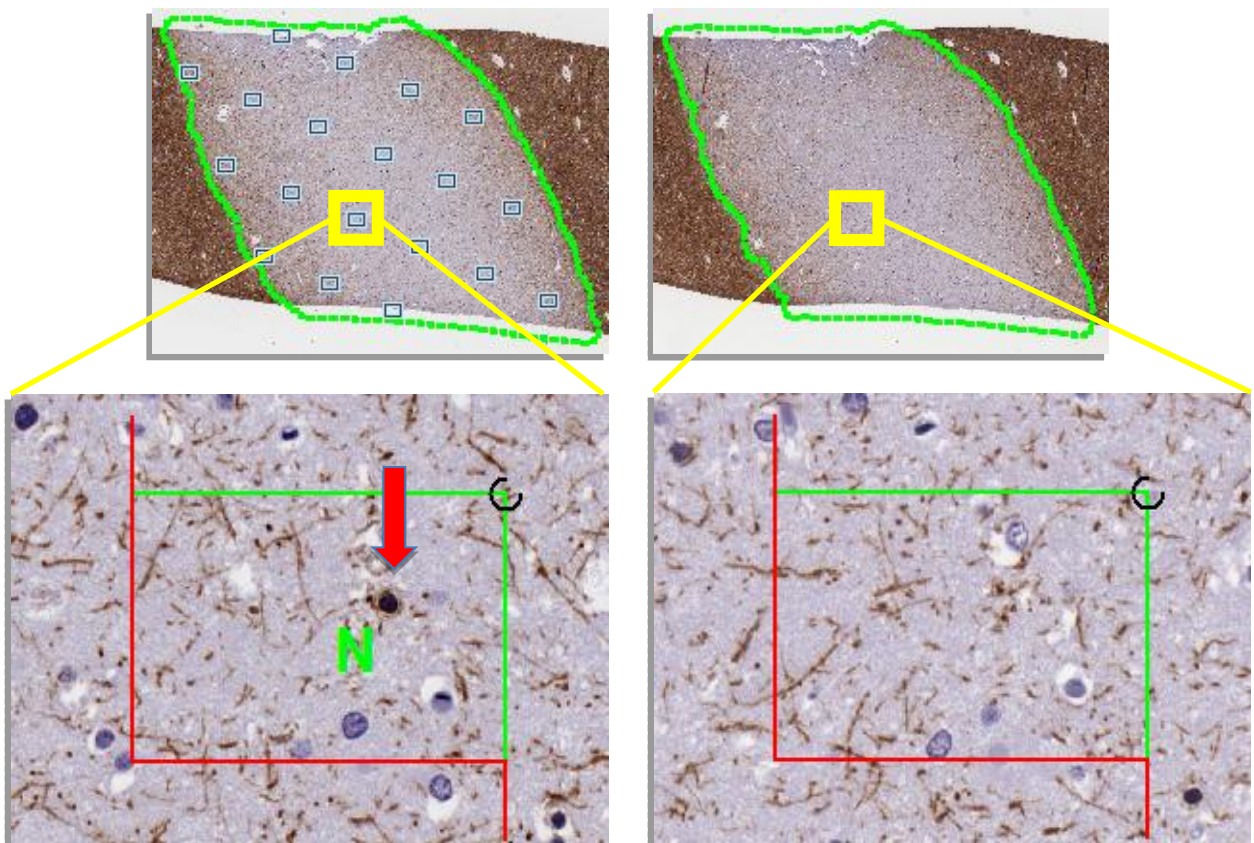
The Autodisector module in the HT Whole Slide Stereology software makes it possible to work fast and efficiently with the Physical Fractionator Principle by automating the most time-consuming aspects of the physical disector.

How does the Autodisector module work?

1. Performs an automated detection of all tissue sections on all slides
2. Allows the operator to "pair" identified tissue sections whether on the same or on different slides
3. Performs initial match of tissue sections (translation, rotation, and local deformation)
4. Allows the user to define the regions for sampling (defined on the reference sections)
5. Performs a fully unattended sampling and storage of perfectly matched disector pairs at any working magnification (tissue independent)
6. Allows for off-line analysis at remote analysis stations.
7. Enables history of countings for personnel training and regulatory documentation.

Count of oligodendrocytes using the automated physical disector

The number of oligodendrocytes in post mortem brain is estimated using the automated physical disector on pairs of serial sections. The Autodisector module automatically aligns the tissue sections at low magnification *and* aligns the fields of view at high magnification. Below, an aligned tissue pair (upper images). Systematic uniform random sampling is performed (upper left) and the sampled fields of view are aligned and counted (lower images).



Left section with example field of view. Oligodendrocyte count marked with red arrow and green N.

Right section with corresponding field of view aligned to field of view from left section.