Press Release

Histalim introduces MORPHOMETRIX™: an innovative platform dedicated to the identification and validation of tissue morphologic biomarkers

Montpellier, the 20th of July 2015

The platform was designed to select diagnostic or predictive biomarkers from histological slides, without a-priori.

Thanks to a large collection of morpho-mathematical parameters (dispersion, color, circularity, uniformity, granulometry...), the platform was inspired by a Big Data approach. It can extract characteristics able to respond to a biological problem. Information are then compared with standard data (analytic, omics, preclinical, clinical, histopathological ...) to evaluate their relevance and to select the better mix of parameters.

A first test was performed to resolve a problematic concerning the grading of liver fibrosis (METAVIR score). Indeed, the middle grades of liver fibrosis diagnostics i.e. F2-F3 grades are difficult to discriminate and therefore there is a high variability between pathologists. The analysis was performed on 12 human hepatic biopsy samples (from 6 different patients) after a Sirius red staining.

This allowed to highlight an optimal combination of morphological markers which describes middle grades with great accuracy. Results were compared with standard anatomopathological scores. A good correlation was observed between morphological index and METAVIR scores (p-value<0.001). Moreover, results were reproducible and non-operator dependent showing that MORPHOMETRIX™ can discriminate efficiently the liver fibrosis intermediate grades.

The innovative image analysis platform will soon be tested on new study cases to determinate all application fields in which MORPHOMETRIX™ could be used.

Automatic scale-independent morphology-based quantification of liver fibrosis
J.Coatelen et al. SPIE Medical Imaging, March 2014
http://www.histalim.com/accueil/activities/chronic-diseases/