

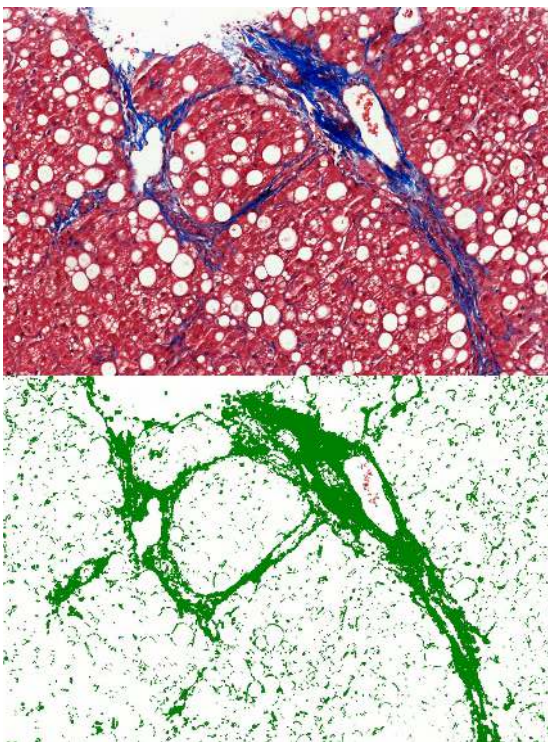
**Reveal Biosciences** is creating a new generation of data powered pathology to enhance research and improve global healthcare. Reveal combines cutting edge artificial intelligence (AI) with traditional histopathology to transform tissue biology into actionable data. **imageDx™**, our data-powered pathology platform provides secure whole slide image management and AI-based image processing in the cloud.

Our fully automated laboratory and experienced scientists also provide histopathology, immunohistochemistry (IHC) and in situ hybridization (ISH) expertise for a wide range of pharmaceutical, biotech, academic, and government institutions. With a world class team of data and research scientists focused on addressing some of the biggest problems in healthcare, Reveal is developing a pipeline of AI-based digital assays for preclinical research, clinical trials, and decision support.

**Summary:** Non-alcoholic fatty liver disease (NAFLD) is one of the most common causes of chronic liver disease. It results in an accumulation of fat in the liver, and can progress to a more pathologically significant form of NAFLD known as non-alcoholic steatohepatitis (NASH). Patients or rodent models of NAFLD and NASH present on a spectrum of the disease, characterized by hepatitis (inflammation) and hepatocellular ballooning (cellular injury), which can lead to excessive fibrosis and scarring.

Currently, diagnosis is confirmed by liver histology that is qualitatively analyzed by experienced pathologists who assign scores for each feature. However, documented inter-pathologist variability in scoring and the semi-quantitative nature of the scoring system itself highlight the need for new quantitative methods to ensure the unbiased, consistent assessment of disease.

**imageDx™: NASH** is a collection of artificial intelligence (AI)-based pathology models to provide quantitative histopathology data from NASH rodent or human tissue. These machine learning algorithms were developed with input from experienced pathologists with the goal of providing a more quantitative and reproducibly analysis of the tissue pathology. The data outputs are listed below.



**Figure 1.** A.: Liver tissue stained with Masson's Trichrome. B. Digital mask showing Trichrome positive tissue for quantification.

Tissue Feature	Output
Steatosis	Percentage (%)
Macro-vascular	Percentage (%)
Micro-vascular	Percentage (%)
Steatosis Score	Algorithm-derived score
Average Vesicle Size	um <sup>2</sup>
Immune Cell Density	Count, Area
Inflammatory Score	Algorithm-derived score
Immune Cell Foci	Count, Mean Foci Size
Ballooning Hepatocyte Density	Ballooning cells per cm <sup>2</sup>
Ballooning Score	Algorithm-derived score
Mallory Bodies	Present or Absent
Fibrosis Area	Percentage (%)
Junction Branches	Percentage (%)
Fibrosis Score	Semi-automated score
Tissue Area Analyzed	mm <sup>2</sup>