FibroNest is based on the hypothesis that fibrosis expresses multiple and different histology phenotypes. We quantify them across 3 phenotypic dimensions with Signal-to-Noise >100.


FibroNest Workflow
Delivered Worldwide via the cloud

(A) 20x Biopsy (Sirius red or Mass Trichrome, H&E)  (B) FibroNest Color Normalization and deconvolution Green: collagens, Red: tissue (C) Augmented visualization of the Digital Image (aid to adjudication) – FibroNest quantification Red: assembled collagen, Yellow: interstitial collagen, Blue: steatosis (D) Yellow: interstitial collagen alone (E) Red: assembled collagen. The coalescence of interstitial collagen (yellow) into assembled collagen (Red) is a marker of fibrosis progression.

“Non-invasive Workflow”

Once Calibrated, the FibroNest Phenotypic Assay is “Frozen” and kept constant for every model.
PharmaNest – ViQi Platform
Using Next Generation of Cloud-based Bioimaging and Computation Infrastructures

Web-based viewers and collaboration
FibroNest Analysis
Annotations and metadata e.g. Biomarker
AI & ML

Unlimited Computing Power applied to Fibrosis, Disease Activity and NASH Challenges
Designed to enable Pathomic Fusion
Is FibroNest Validated to quantify NASH Severity and Drug Response?

FibroNest is validated on >20 Animal Models Including several KO models

FibroNest Classifies NASH-1 vs NASH-2 patients based on their Fibrosis Phenotype (E) and Correlates with NASH-CRN stages (F)

FibroNest can calculate Specific scores to better resolve F2<>F3 if and F3<>F4 if needed

“Disease Activity” Quantification (inc. Tissue & Lobular Inflammation, Hep. Ballooning) in Q1 - 2021
FibroNest @ Clinical Studies

Inspired From.....

Pharmacological Quality assurance guidance for scoring and reporting for pathologists and laboratories undertaking clinical trials work

Clinical Trial Imaging Endpoint Process Standards
Guidance for Industry

Considerations for Use of Histopathology and Its Associated Methodologies to Support Biomarker Qualification Guidance for Industry

FibroNest Digital Pathology Imaging Charter

Secure: Attack Vulnerability Audits Passed

Dual Site Back Up of data “As Generated”

Full Audit Trail

Raw Data (~8000 features per biopsy) stored as long as needed

Analyses images available to clients and their pathologists

Ready for Pathomic Fusion

FibroNest Workflow (same slide)

Placebo

Treatment

T1 Biopsy

T2 Biopsy

Categorical Changes %

Images & Data

Digital Pathology Imaging 20X

Pathology Scoring

Aid to Adjudication (?)

Phenotypic Continuous Scores
PharmaNest

FibroNest benefits (Today)

Translate Fibrosis and associated features knowledge from Discovery to the clinic, and across organs.

Quantify fibrosis when no quantification system exist

Aid Pathologists in the assessment of “grey zone stages” and reduce the variability of Gold Standard

Resolve subtitle changes in Fibrosis and Disease Activity

Support the development of novel NIT

Areas of Industry & Regulatory Discussion / Innovation (SIG ?)

NASH Clinical Trial NASH Digital Pathology Endpoint process Standards – Guidance ?

Adequate Digital Liver Biopsy?

Should “Robotic Pathology” participate in the Adjudication process for the Gold Standard?