

PharmaNest Inc.

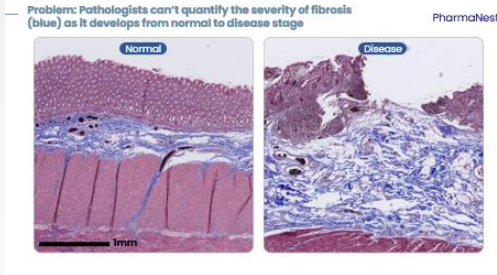
**Addressing a growing Unmet Medical need
with Digital Pathology and AI**



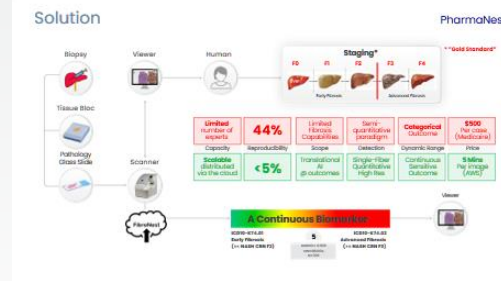
Mathieu M. Petitjean, Ph.D.
CEO, Chairman of the Board
Mathieu.Petitjean@pharmanest.com



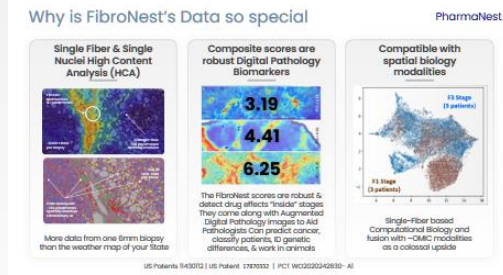
PharmaNest summarized



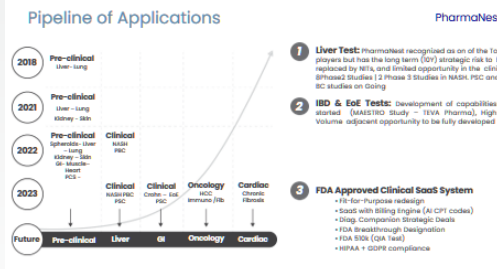
It's the right time: Digital Pathology & Ai | Venture Team
Fibrotic conditions Tsunami



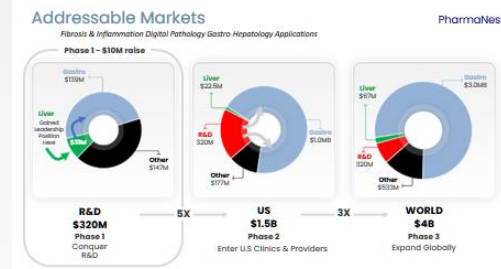
Significant Unmet Medical need & Pharma/Biotech Pain point



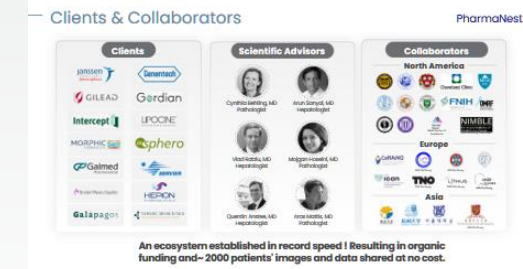
Revolutionary approach and Significantly Differentiated "Single Fiber AI trained on Clinical outcomes"



18 Applications validated, 2 U.S. patents
Leadership Position in Liver (NASH)
| Ready to take over UC-Crohn

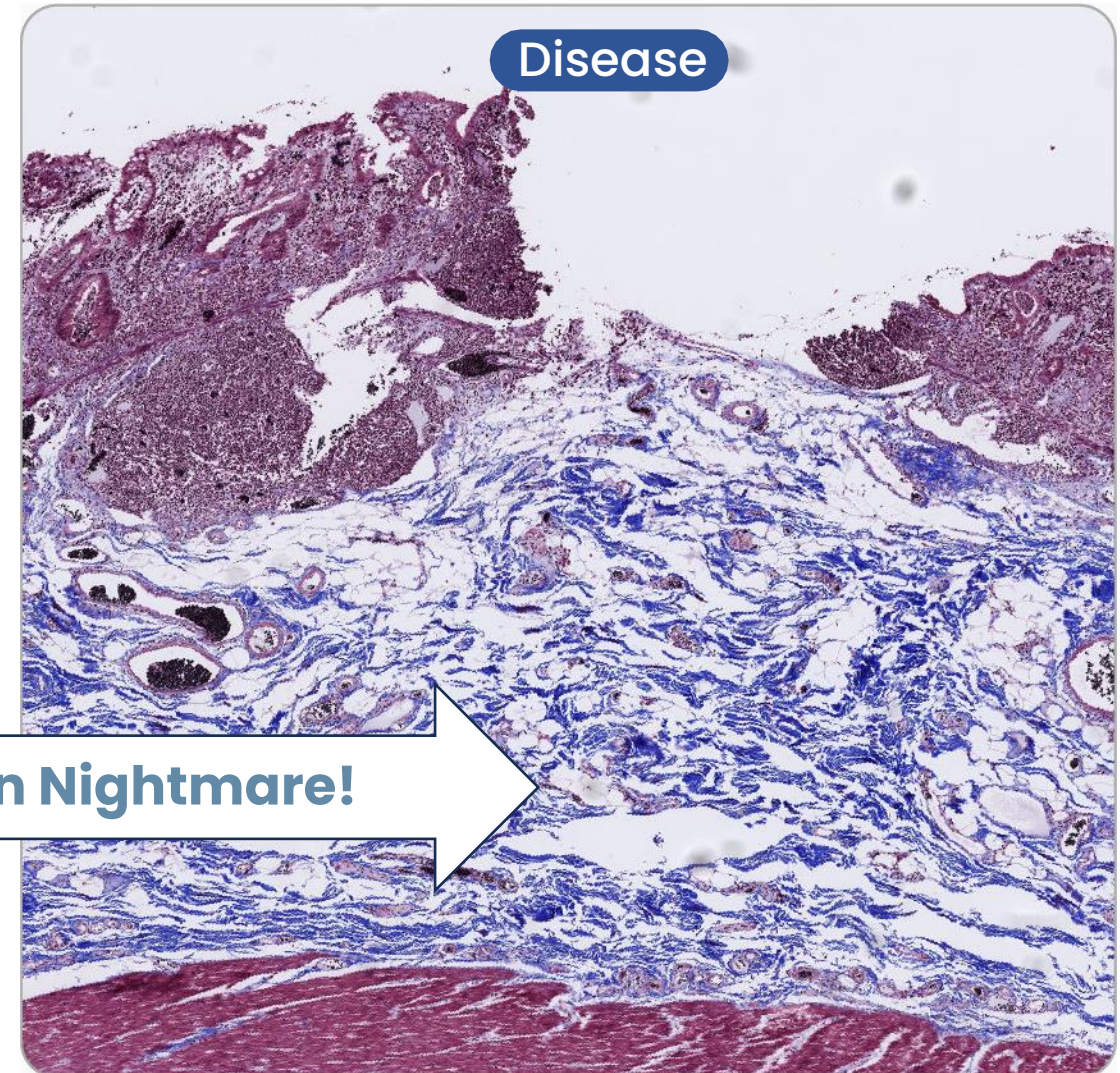
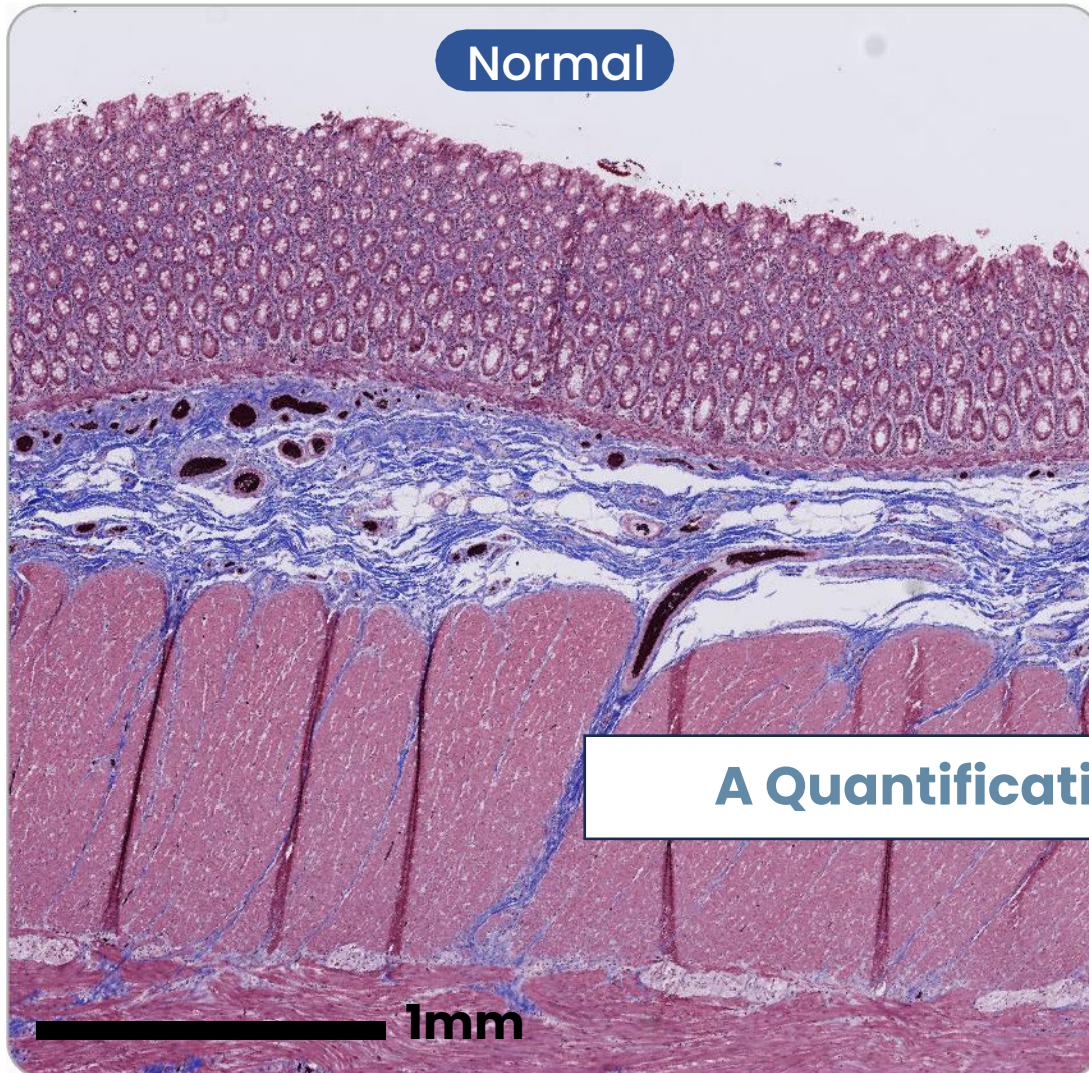


Scalability | Pricing | Plan in place supported by **robust FDA CDHR & CDER game plan** The 5Y objective is to **Generate Cash for Valuation**



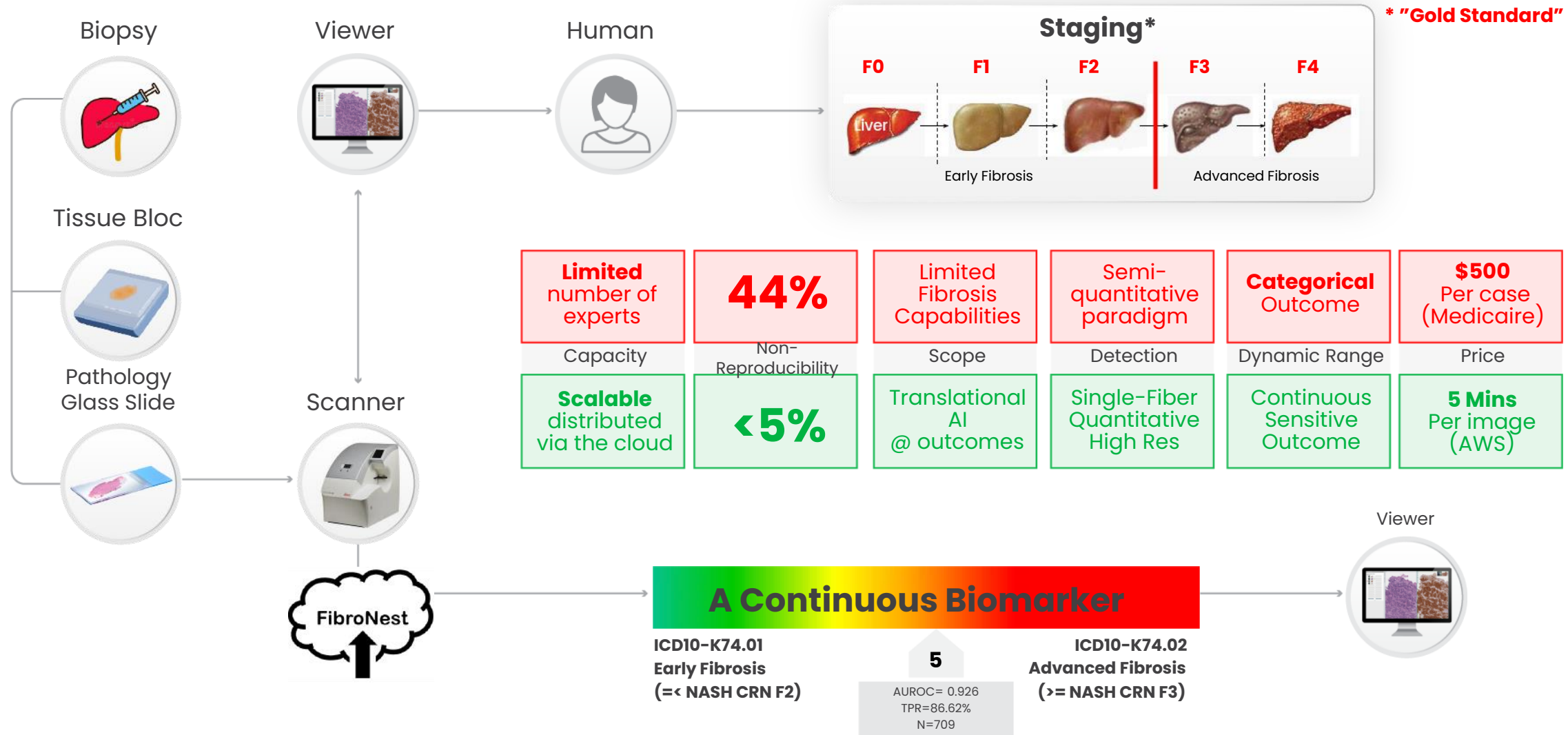
Multiple evidence for future success:
Scientific results + Revenue + Client base + Collaborations

Problem: Pathologists can't quantify the severity of fibrosis (blue) as it develops from normal to disease stage

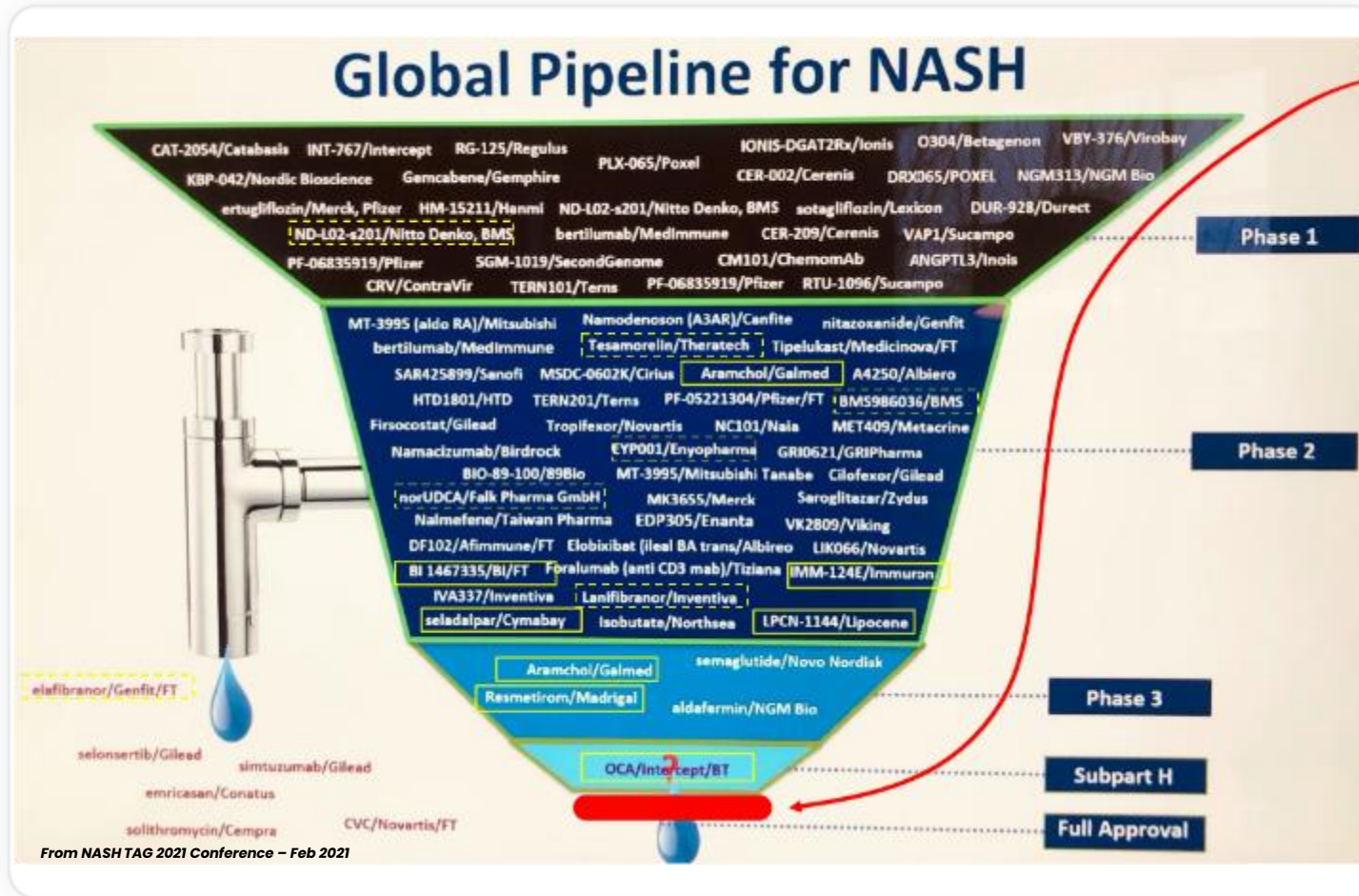


A Quantification Nightmare!

Solution



PharmaNest addresses a growing Unmet Medical Need ...and industry painpoint



FDA Toll gate is highly imperfect:
 FDA interim approval end points are based on Pathologist semiquantitative categorical assessment with poor performance

Drug effects are underestimated..
 Already many bodies on the NASH route

- Genfit BMS
- Intercept
- NGM bio
- GILEAD
- Galmed

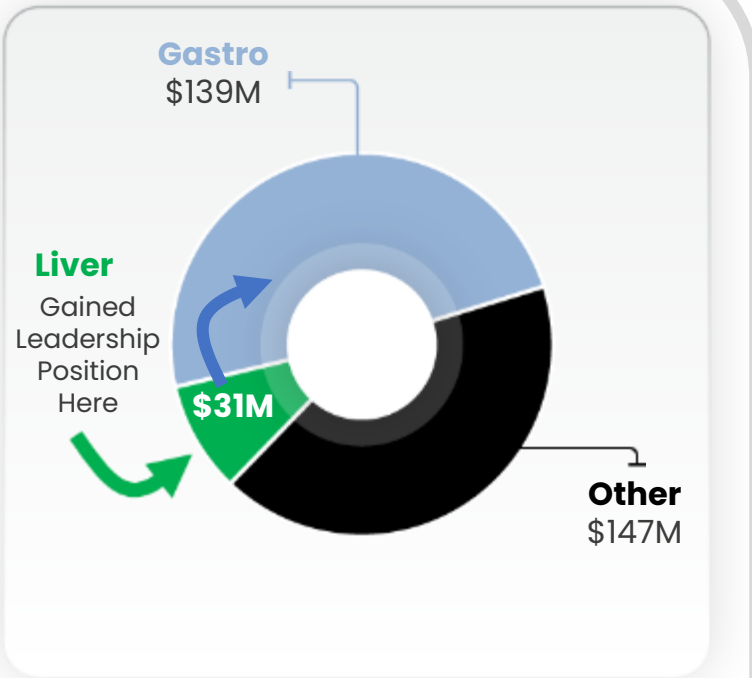
PHARMANEST can fix the gate of NASH anti-fibrotic Drugs Development pipelines!

“Biotech’s Battle against NASH: the ongoing pursuit of an effective Treatment”, December 19, 2023 – Labiotech. [Weblink](#)
 NAHS Treatment anticipated to reach \$43.3B by end of 3035, CGR 18% - 84 NASH Pipeline assets, 4 in Phase 3.

Addressable Markets

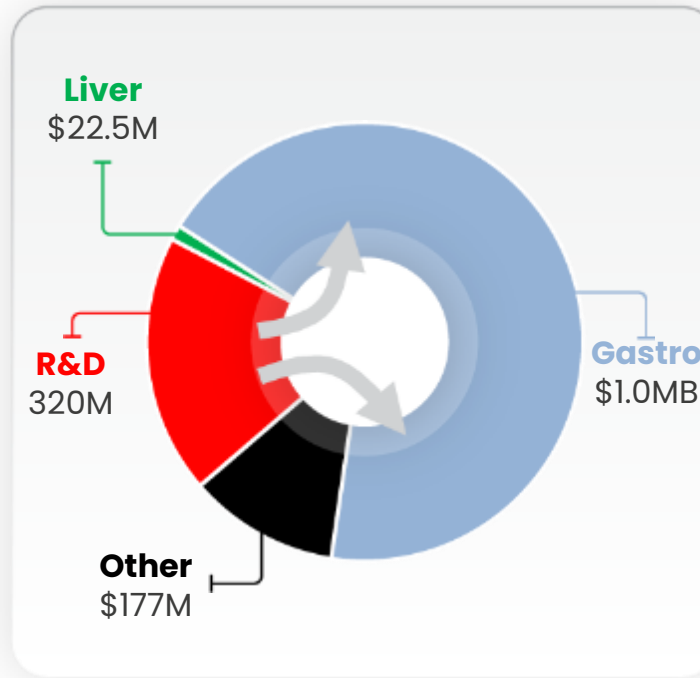
Fibrosis & Inflammation Digital Pathology Gastro-Hepatology Applications

Phase 1 - \$10M raise



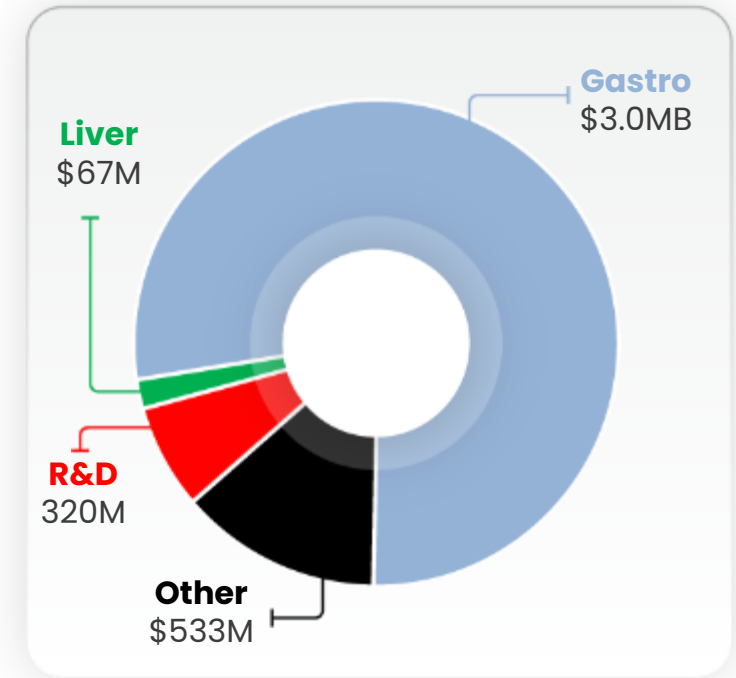
R&D
\$320M
Phase 1
Conquer
R&D

5X



US
\$1.5B
Phase 2
Enter U.S Clinics & Providers

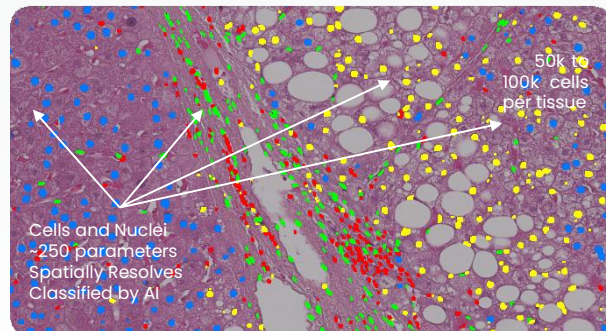
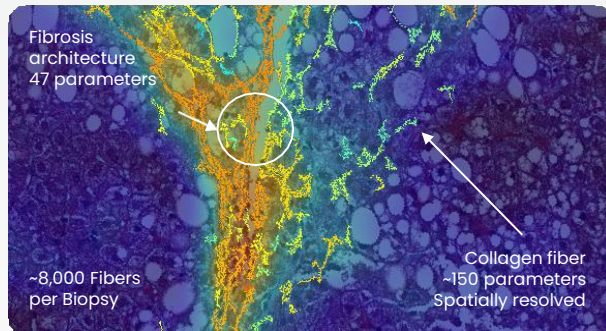
3X



WORLD
\$4B
Phase 3
Expand Globally

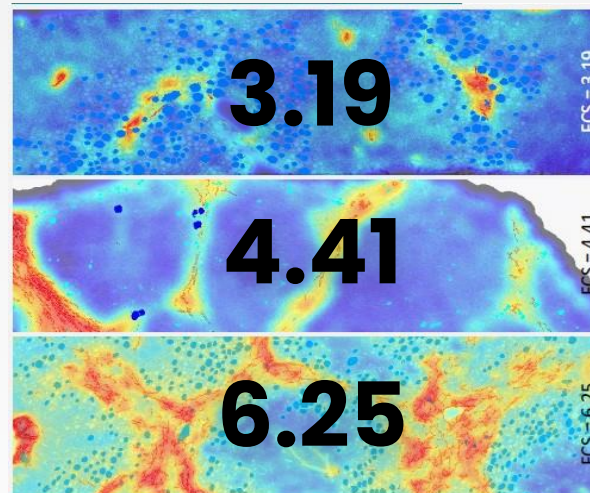
Why is FibroNest's Data so special

Single Fiber & Single Nuclei High Content Analysis (HCA)



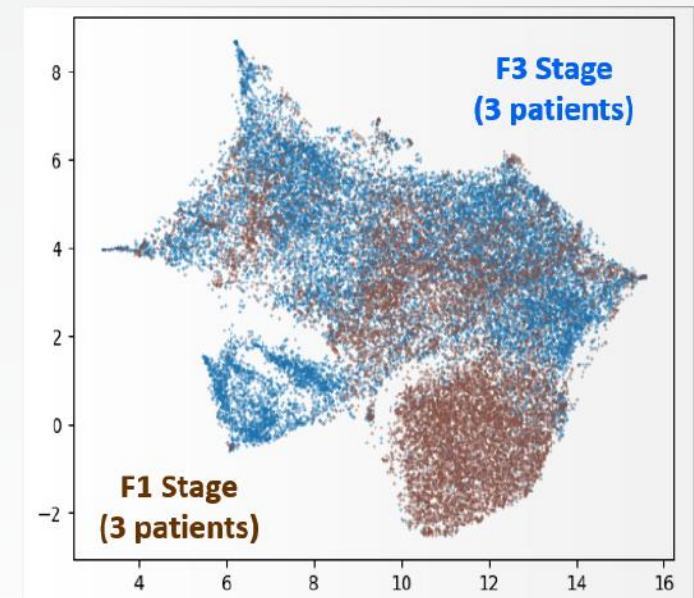
More data from one 6mm biopsy than the weather map of your State

Composite scores are robust Digital Pathology Biomarkers



The FibroNest scores are robust & detect drug effects "inside" stages
They come along with Augmented Digital Pathology images to Aid Pathologists Can predict cancer, classify patients, ID genetic differences, & work in animals

Compatible with spatial biology modalities





Single-Fiber based Computational Biology and fusion with -OMIC modalities as a colossal upside

Competitive Position

We are the only AI solution trained on clinical outcomes from conventional images



			PHARMANEST
Company DNA	Digital Pathology AI & Related Services	Microscope Manufacturer Fibrosis Image Analysis	High Resolution Digital Pathology Fibrosis and Inflammation
Technology Approach	Digital Pathology Image AI@ Tile based Trained by Pathologists	Different Tissue Sample Custom Low Res Microscope Basic Image Analysis	Digital Pathology Image AI@ Single Fiber Nuclei Trained by outcomes
Cloud?	Yes FDA Viewer (Diag)	NO	Yes FDA Viewer (RUO)
Applications & Market Generation	Addressing Clinical & Provider needs where existing Histological Paradigms can be automated	Fibrotic conditions in Liver using sophisticated microscopy	All Fibro-Inflammatory conditions even if Pathologists have no quantification solution
Track Record	Preclinical: 0 Drug Dev: ~ 8 Ph.2 – 1 Ph.3	Preclinical: ~30 Drug Dev: ~ 11 Ph. 2 – 1 Ph. 3	Preclinical: 60+ studies Drug Dev: 8 Ph. 2 – 2 Ph. 3
Cost Structure	Heavy ++ Headcount of Pathologists ++ Lab Operations	Subsidized +++ Sales & Marketing Equipment Manufacturer	Nimble Tech-company (no materials handling)
Scalability & Distribution	Yes Highly funded	Poor (\$500k / microscope) MRE more affordable	Multivendor Capable Highly Scalable Via the cloud

Three Highly Scalable Market Access Models to Generate Revenue and Price

Revenue Generation



Biopharma partnerships for clinical trials to reduce screen failure rates, enrich patient enrollment and measure endpoints



Partnerships with CROs to scale up worldwide and provide high-performance, AI assisted end-to-end Pathology Tissue Assays



Co-development and commercialization of companion diagnostic for anti-fibrotic (single agent or combination) drugs

PharmaNest Offering

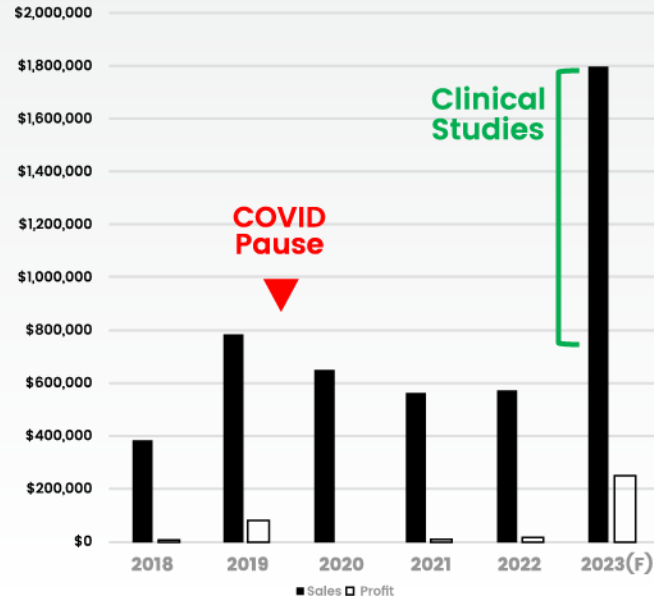
- ⦿ Two proprietary Digital Pathology biomarkers driving highly accurate and scalable tests for fibrosis and Inflammation
- ⦿ Commercialization in Hepatology (liver, NASH) fibrosis with expansion to Gastroenterology (Crohn's, EoE)
- ⦿ Scalable, Automated continuous endpoints with high detection threshold reduce trial failures and accelerate development timelines
- ⦿ FibroNest's spatially resolved Single-Fiber Analysis platform compatible with multi-omic fusion and advanced AI discovery methods

\$20M by 2027 with 60 Active clients | ~80%CM | \$80 M commercial pipeline

Sales & Marketing

Historical Sales performance & upcoming opportunities

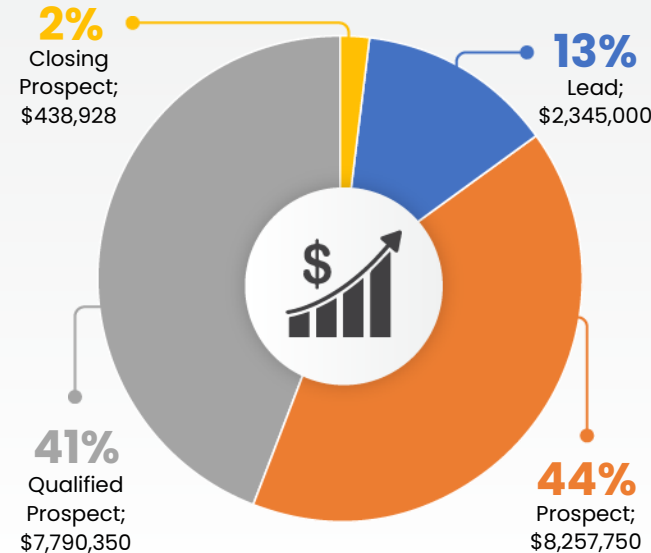
Historical Sales & Profit



Lessons Learned

- Value Proposition works
- 1 Headcount can deliver ~\$600k
- Clinical Trials deals: 2Y cycle
- Highly consultative, account centric Sales Process

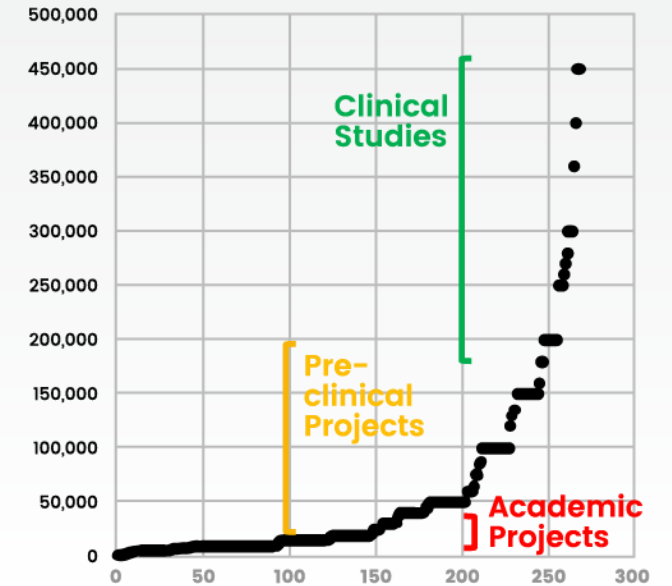
PharmaNest Sales Pipeline



\$18M Sales Funnel Profile

- High Growth forecast for 2024-2026
- ...if Headcount is allocated to close the existing opportunities and generate more

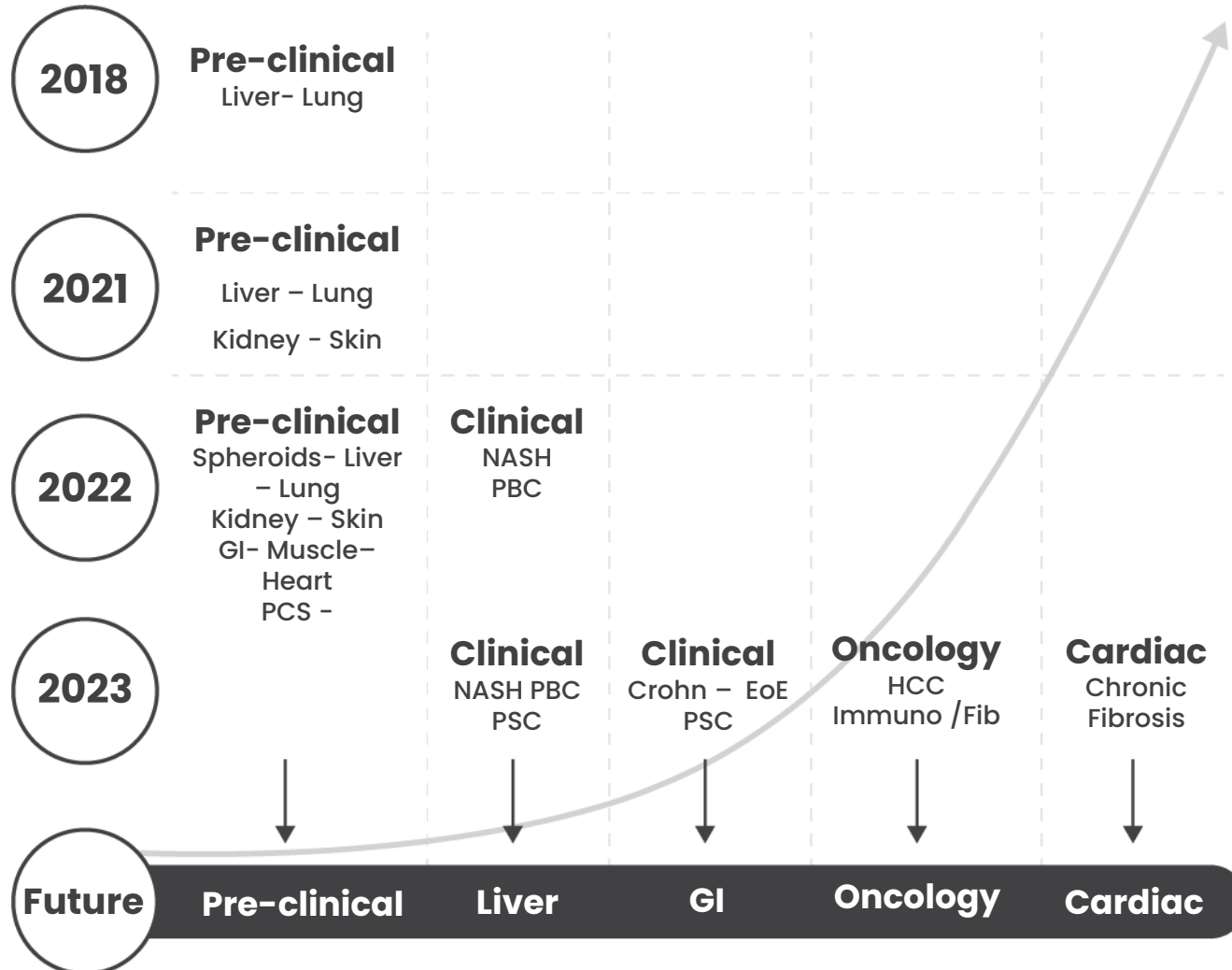
USD Value per Opportunity



Importance of Revenue Mix

- Preclinical : \$20-30k, high volume, quick turnaround, biology driven
- Clinical: \$200k-\$1M over 2-3 years, slow sales cycle, driven by FDA acceptance

Pipeline of Applications and 5-Year Focus



1 Liver Test: PharmaNest recognized as one of the Top 3 players but has the long term (10Y) strategic risk to be replaced by NITs, and limited opportunity in the clinic. 8Phase2 Studies | 2 Phase 3 Studies in NASH. PSC and BC studies on Going

2 IBD & EoE Tests: Development of capabilities started (MAESTRO Study - TEVA Pharma), High Volume adjacent opportunity to be fully developed

3 FDA Approved Clinical SaaS System

- Fit-for-Purpose redesign
- SaaS with Billing Engine (AI CPT codes)
- Diag. Companion Strategic Deals
- FDA Breakthrough Designation
- FDA 510k (QIA Test)
- HIPAA + GDPR compliance

Consultative Sales Deployment

Strategic CRO Partnerships

Execute Liver Outcomes Study

Validate UC/Crohn/EoE

Execute FDA – BPQ

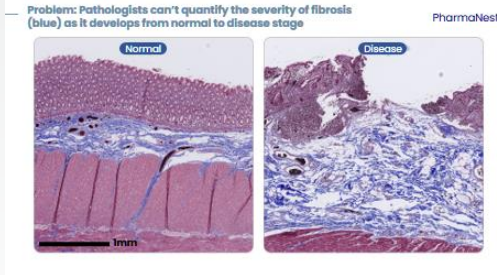
Execute Evidence Generation Plan

**Series A:
Targeting a
~\$10 Million
Raise**

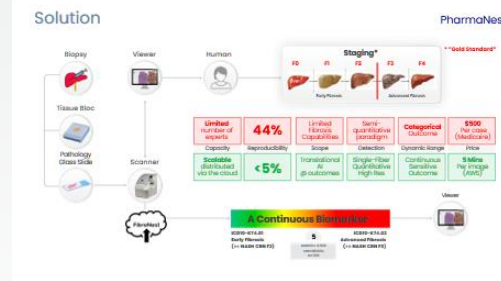
Future Capital & Exit Strategy

- ⦿ \$5M self funded since inception. Series B, IPO or reverse merger to scale up commercialization in Provider's Markets
- ⦿ Potential for a strategic acquisition by a Diagnostic, Imaging or Digital health player such as: LabCorp, Quest, Roche Diagnostics, Abbott, Thermo Fisher, GE, Philips, Hologic etc. already established with Providers
- ⦿ Some companies growing >50% can command 6x multiple of next 12-months revenue
- ⦿ Assuming \$450/case (current CMS Payment for Histology review) 20% penetration in Gastro-Hepatology, and by year 3-4 of launch, the ROI could be highly meaningful

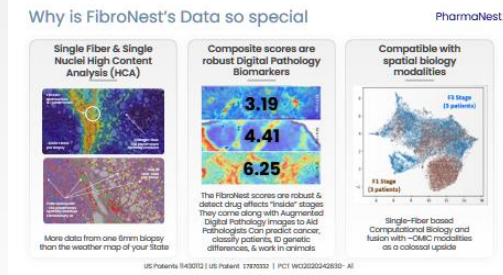
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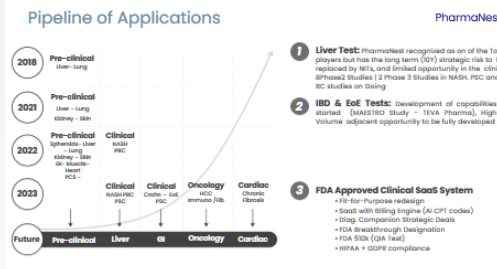
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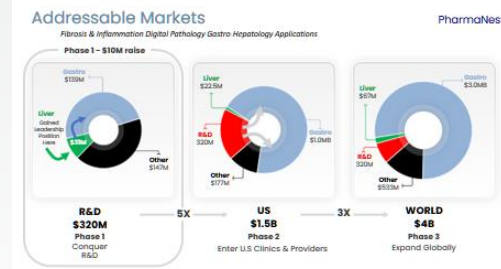
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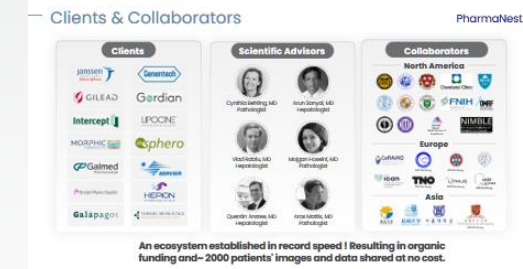
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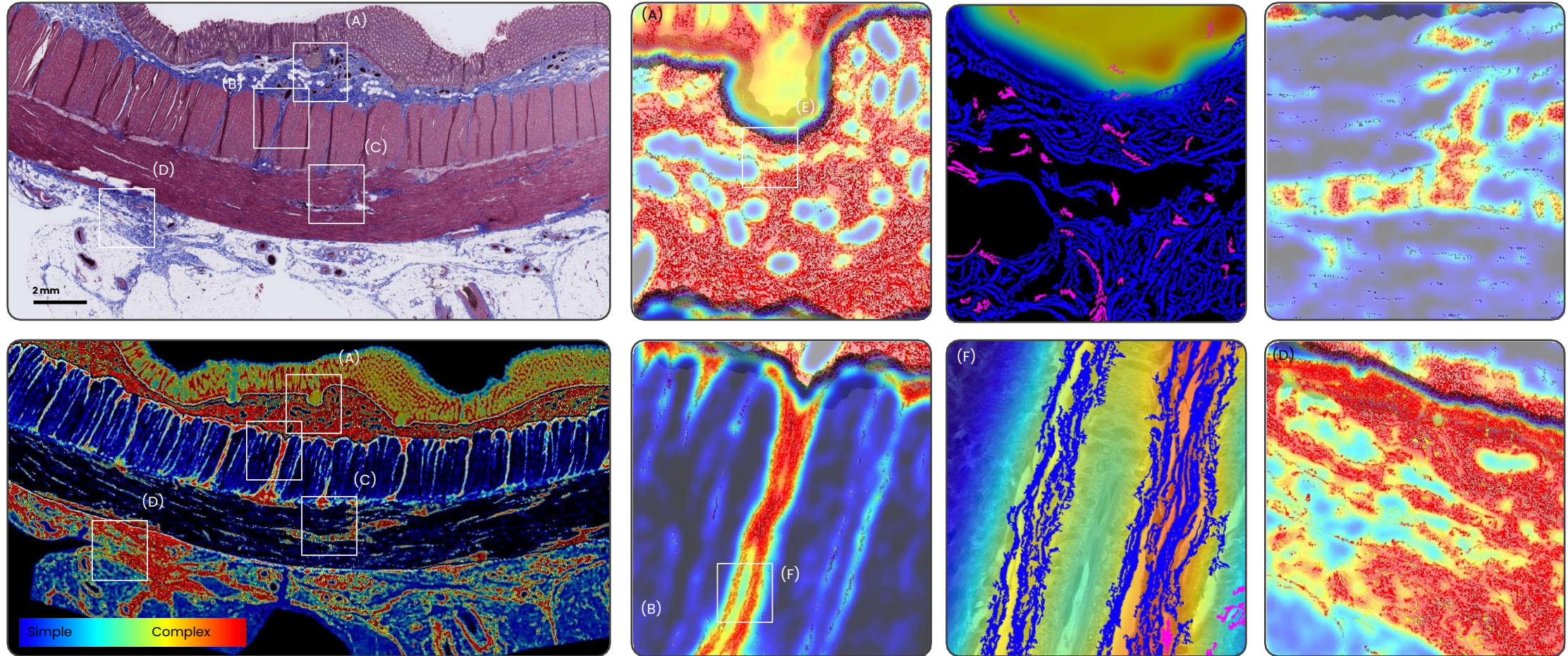
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Multiple evidence for future success:
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Appendix

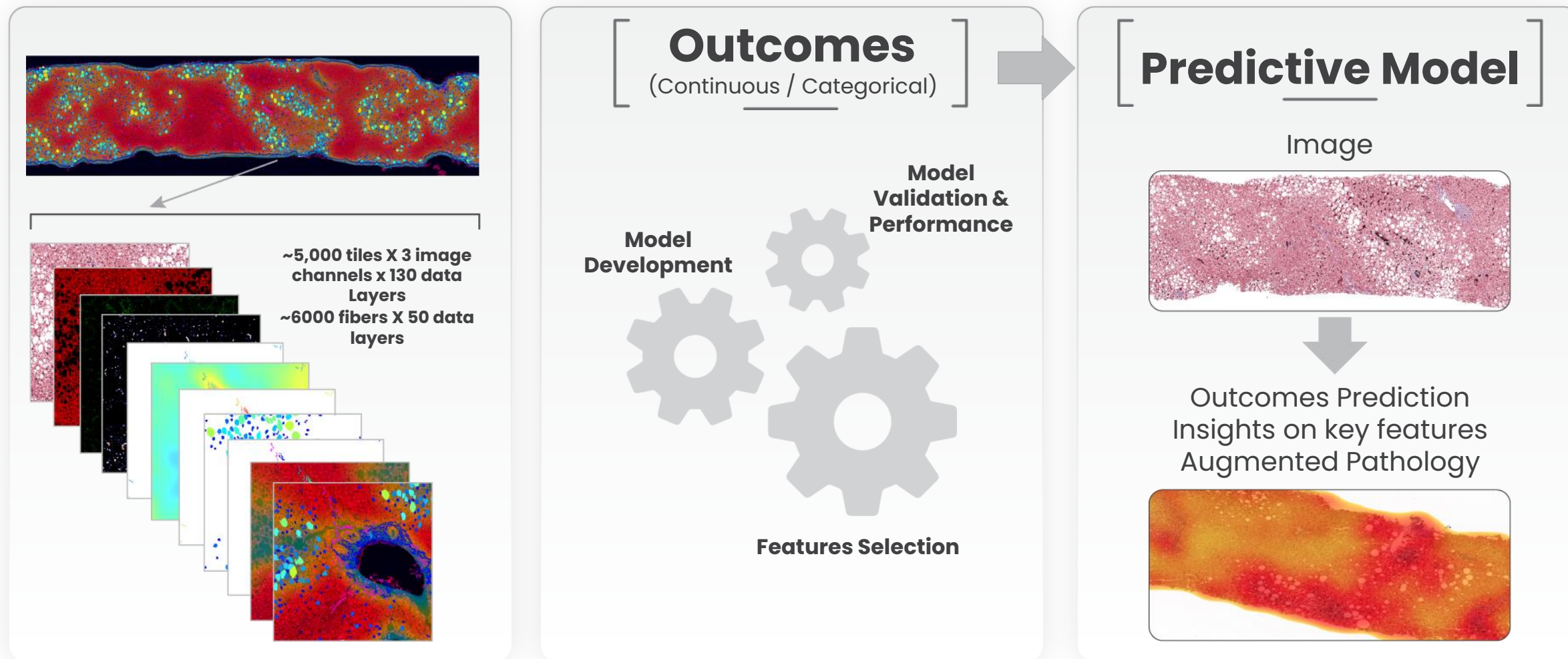
FibroNest Method – Single Fiber AI Approach applied to complex GI tissues



Contribution of Digital Pathology and AI to the quantification of fibrosis in Crohn's disease. Li Chen¹, Miha Jerala², Nina Zidar², Mathieu Petitjean¹ PharmaNest, Inc, Princeton, New J, USA, ²Faculty of Medicine, Institute of Pathology, University of Ljubljana, Ljubljana, Slovenia.
Keystone Fibrosis & Tissue Repair Symposium 2023 (Poster Here) Two manuscripts in process – 2 Phase 2 Clinical trials

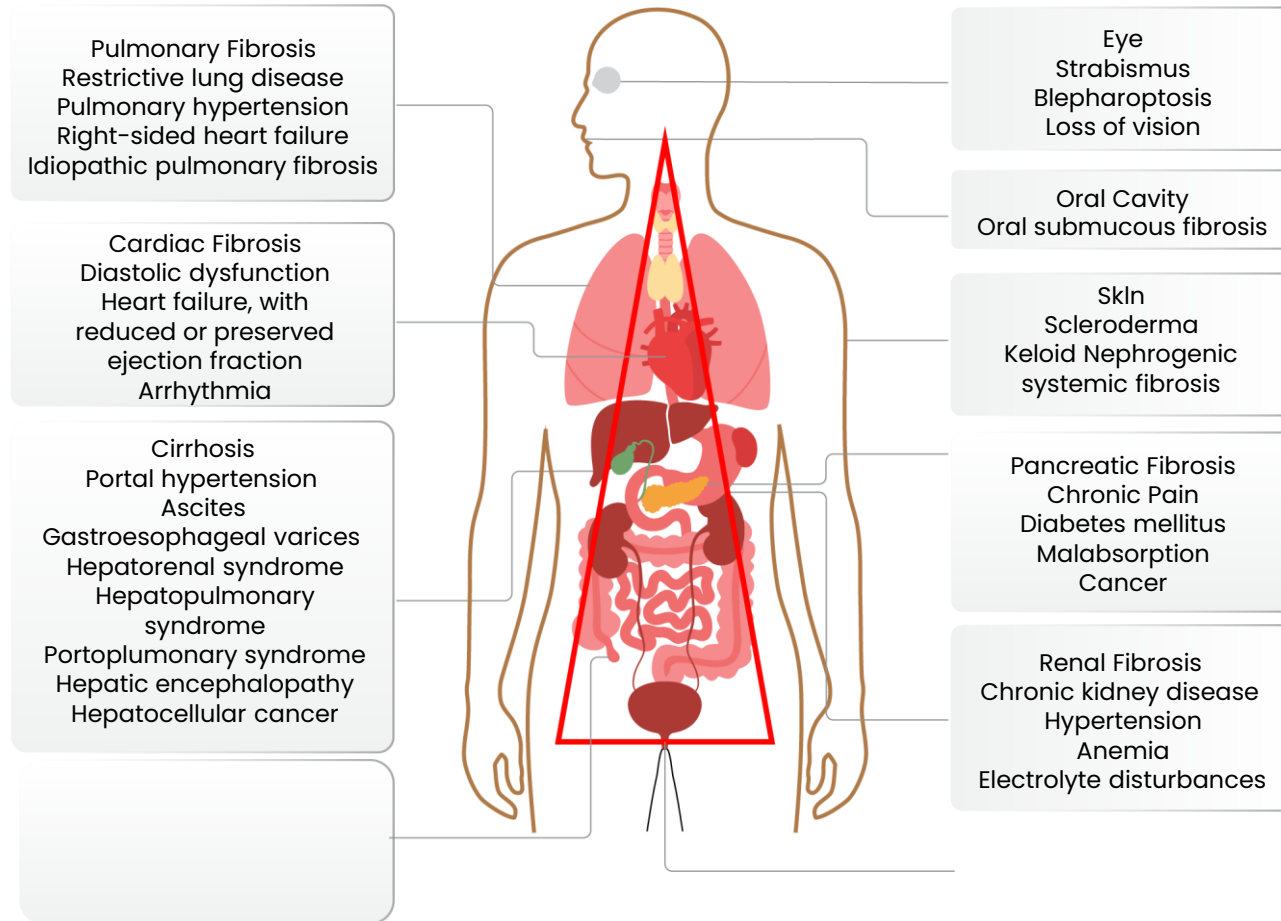
Why is FibroNest so special?

Works for all kind of Phenotypic Question



US Patent 11430112 – PCT WO2020242630- A1

45 % of all deaths in the developed world are associated with chronic fibroproliferative diseases*



Markets Seen from Pharma companies

LIVER

Inflammation & Fibrosis



NAFLD > NASH
+ 30% of Adults
2025 - \$21B - 58% CARG

GI Track

Inflammation & Fibrosis



UC- Crohn's
1.4M Affected (US)
2029 - \$12.6B - 6% CARG

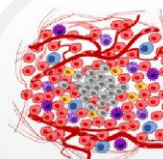
LUNG

Inflammation & Fibrosis



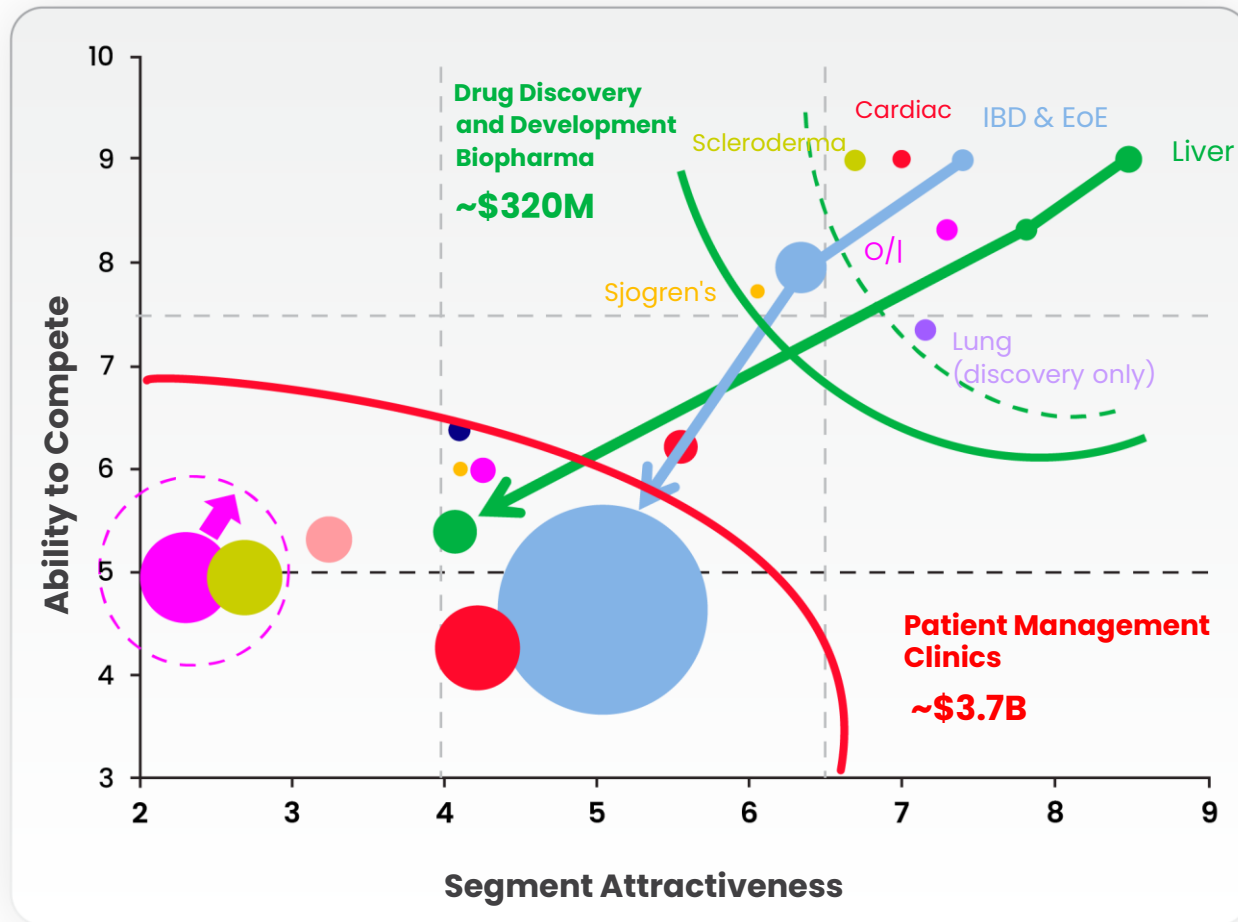
TUMOR

ECM & Fibrosis



Strategic Segmentation & Multi-Generation Strategic Plan

A Gastro-Hepatology Strategic Focus



Source: PHARMANEST Market Segments and Profitability Chart 10.05.2023

1 **Liver:** PharmaNest recognized as one of the Top 3 players but has the long term (10Y) strategic risk to be replaced by NITs, and limited opportunity in the clinic. Brand Leadership, Pricing (FD) and Volume (sales) opportunity

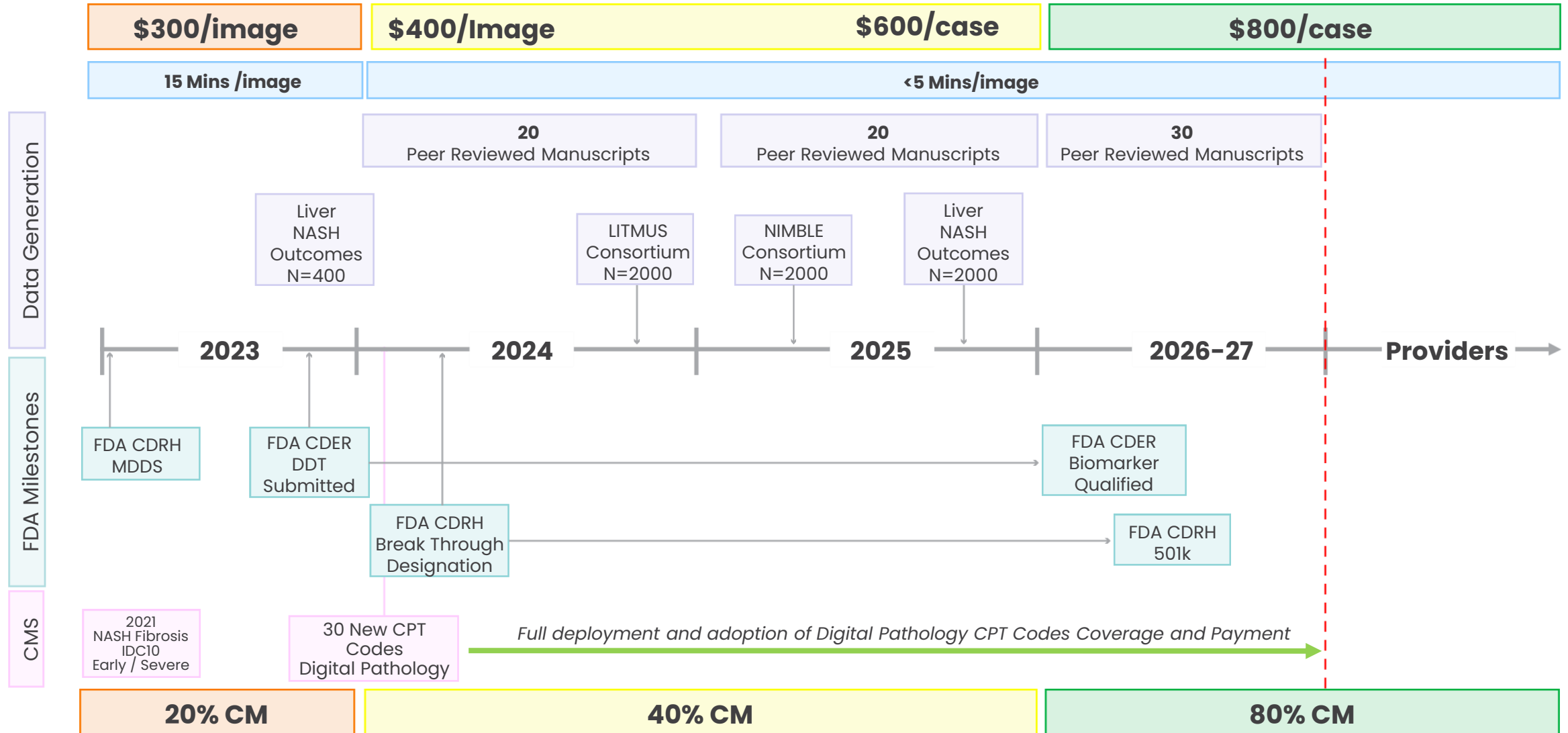
2 **IBD & EoE** Development of capabilities started (MAESTRO Study – TEVA Pharma), High Volume adjacent opportunity to be fully developed

Contingency plan: Onco-Immunology and Cardiac applications must be explored

- ⊙ **OncoNest: Oncology (Fibro-immuno-oncology):** combination of α-PDLA1 and α-Fibrotic compounds extend life (2022 work with Genentech, MT Sinai, BIDMC, 2023 BMS innovation award)
- ⊙ **CardioNest: Cardiac fibrosis:** Monitoring of Cardiac acute and chronic injury (cardiac biopsy). 2023 Work with U Michigan
- ⊙ Other Pipeline opportunities will serve as additional back up/upside & drive additional Portfolio valuation

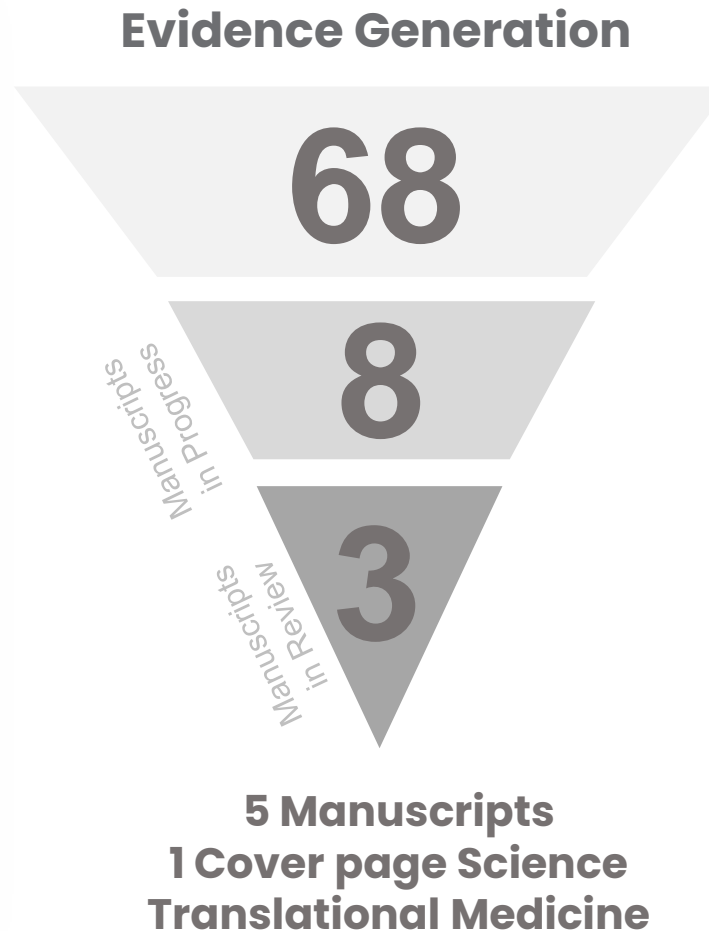
Strategic P&L Plan:

Generate Price and Cash to raise Valuation



Evidence Generation Plan

Clients



Collaborators

North America

	2000 Pts Study

Europe

400 Pts Study	400 Pts Study	2000 Pts Study	200 Pts Study

Asia

			400 Pts Study

~ 6000 patient's images and data (\$60M Value) shared at no cost.

Competitive Position ... Simply said

PathAI

All kinds of Conditions
Same Images as pathologists

Standard Digital Pathology Scanners

Cloud Digital Pathology

Use image / pattern AI to Automate Pathologists Scores and paradigm
(The approach works for all kind of condition)

Automated Pathologists Stages

...& other exploratory ROU panels & scores



PHARMANEST

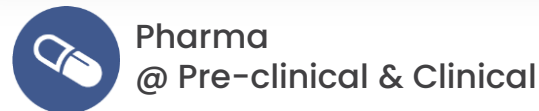
Fibrosis and Inflammation only
Same Image as Pathologist

Standard Digital Pathology Scanners

Cloud Digital Pathology

Run High Resolution Single Fiber and Single Cell Digital Pathology and AI
(Single Cell Analysis model)

...& other exploratory ROU panels & scores



HISTOINDEX®

Fibrosis only
New Tissue Section

Proprietary Two Photon Microscope
(Collagens I and III, Nuclei)

Singapore or Regional Labs
(several failures n the US)

Runs MATLAB image analysis on low resolution images of fibrosis
METAVID/ Zonal @ Liver

...& other exploratory ROU panels & scores

