

Disease Management Platform for Complex Chronic Disease

Jessica M. Gibson, CEO



PRECISION MEDICINE TOOLS ARE NEEDED FOR CHRONIC DISEASE

Start of symptoms



Complex Chronic Disease:

~75% of US Healthcare Expense
\$ 2.3 TRILLION Annual Spending

Old Way

Healthcare has focused on treating and managing symptoms

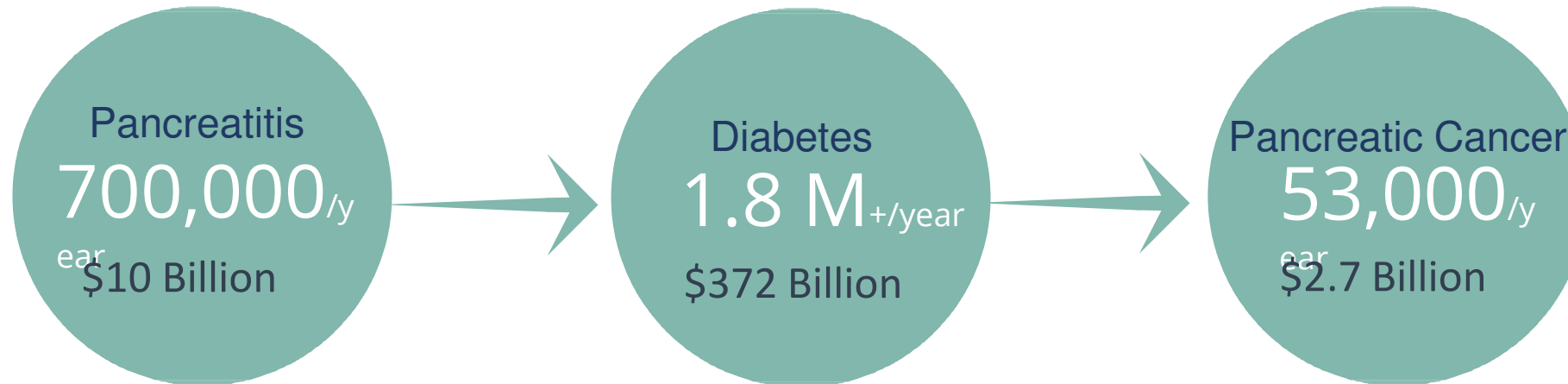
The exact same symptoms can have very different origins or causes and need different management.

Precision Medicine

Identify the mechanisms specific the disease with genetics in the context of environment and lifestyle.

Use evidence based medicine to align therapeutics and targeted management to mitigate, prevent or even reverse disease progression.

DISEASES OF THE PANCREAS



Founder-Dr. David Whitcomb MD, PhD and established network of Medical Advisors and Customers

Stephen Pandol, MD Cedar Sinai
Walter Park, MD Stanford
Vikesh Singh, MD Johns Hopkins
Samer Alkaade, MD St. Louis
Suresh Chari, MD Mayo Clinic
Gregory Cotes, MD MUSC



Darwin Conwell, MD Ohio State
Chris Forsmark, MD Florida
Mel Wilcox, MD MDDU Alabama
Michael Rickels, MD Penn
Andres Gelrude, Gastro-Health
Melena Belin, MD Minnesota

Global experts in pancreatic disease, over 1,000 publications, and hundreds of years of cumulative clinical and research experience

EXPERT SYSTEMS IDENTIFY DISEASE DRIVERS & SOLUTIONS

Each patient has a **unique environment**, **lifestyle** and events that contribute to disease onset and severity



Multiple co-morbidities are common, adding complexity

4. Iterate process as symptoms evolve



Symptoms

Abdominal Pain

Diarrhea

Abnormal Biomarkers

1. Identify & Measure Dysfunction

IMMUNE DYSREGULATION

DUCT DYSFUNCTION

PATHOLOGIC PAIN

ISLET DYSFUNCTION

METAPLASIA



2. Model Long Term Consequences

FIBROSIS/SCLEROSIS

INFLAMMATION

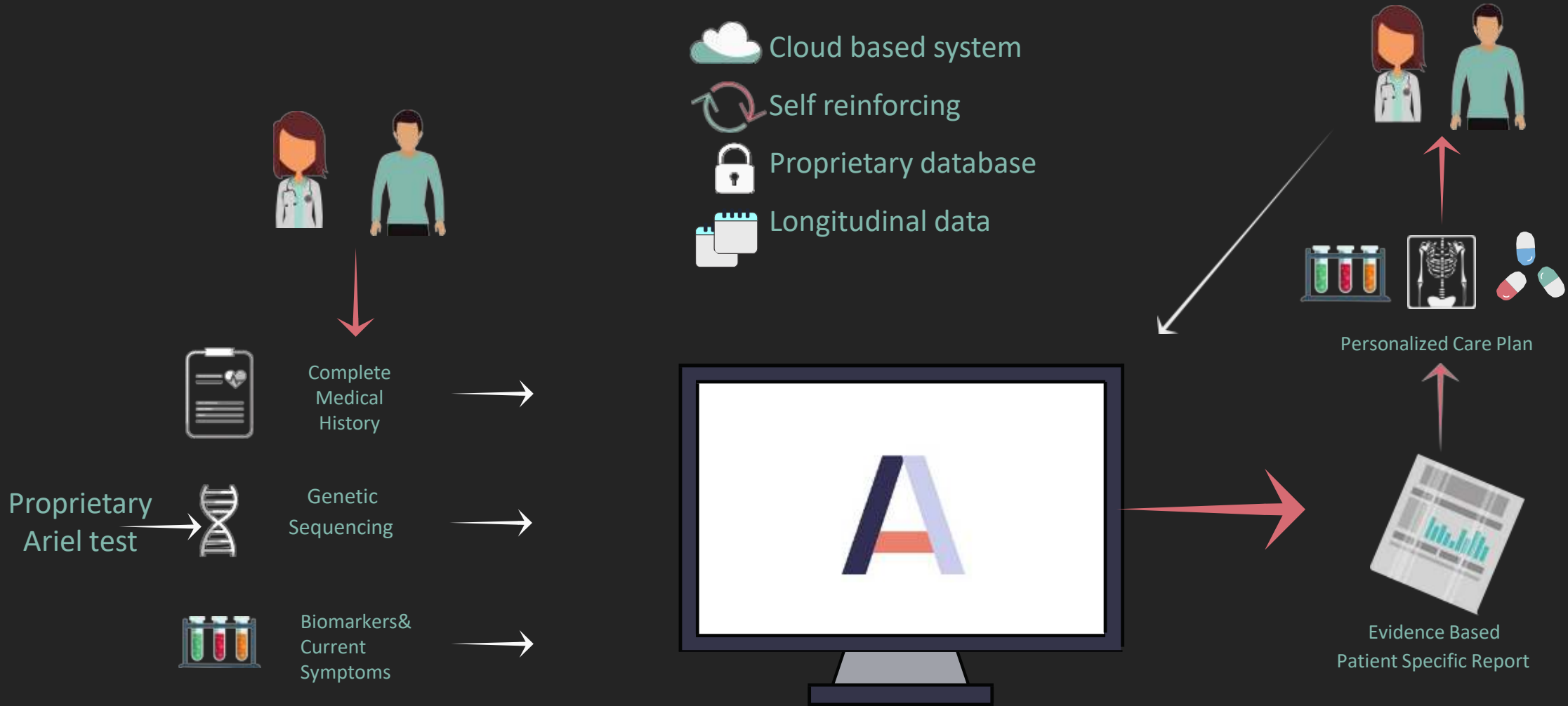
PAIN SYNDROME

DIABETES (Type 3C)

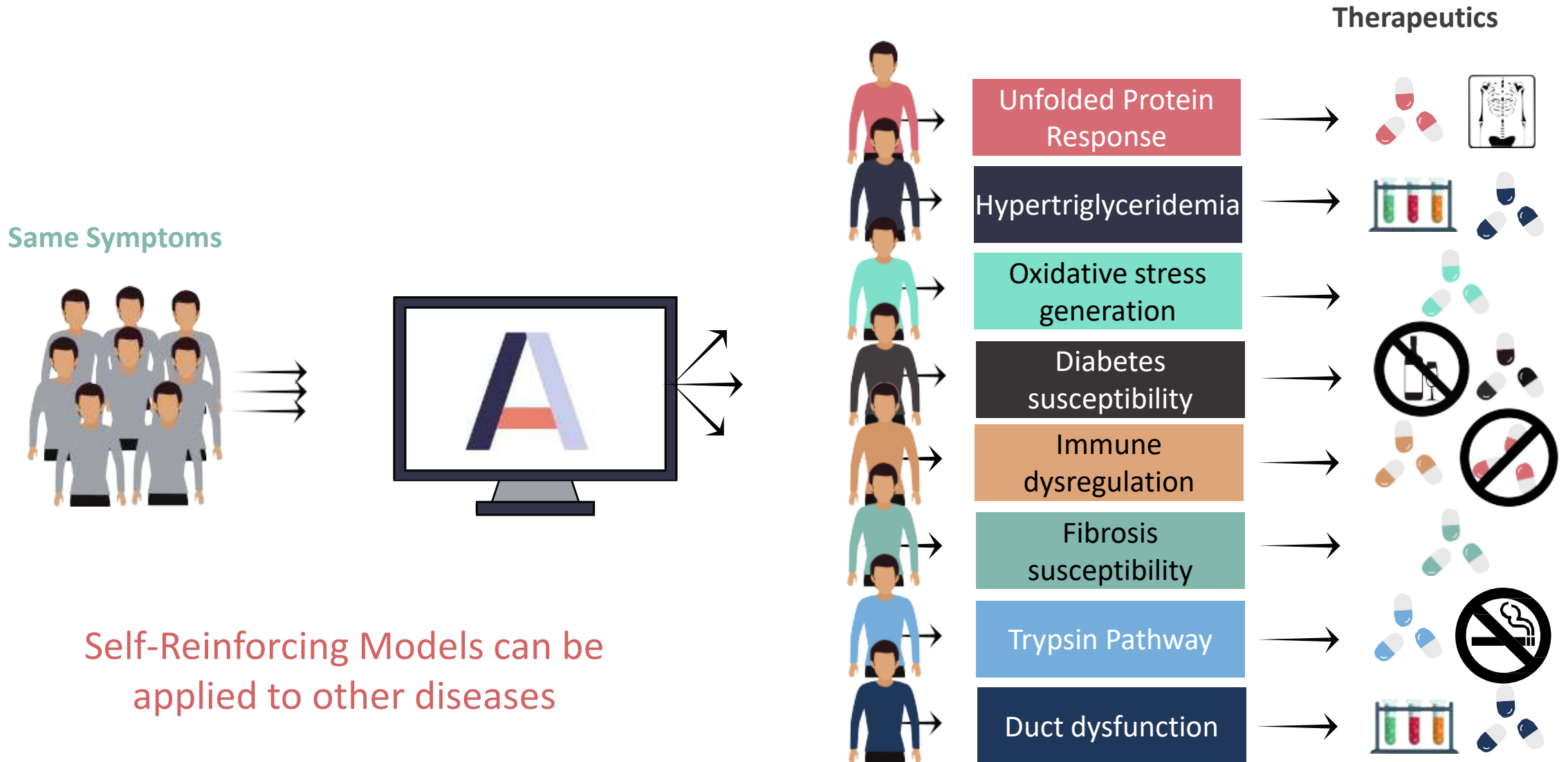
PANCREATIC CANCER

3. Align Solution to mitigate, stop or reverse progression



ARIEL'S PLATFORM DELIVERS THE RIGHT DATA DIRECTLY TO THE DECISION MAKER



ARIEL CLASSIFIES PREVIOUSLY UNIDENTIFIABLE DISEASE DRIVERS FOR NEW THERAPEUTIC ALIGNMENTS & DRUG DEVELOPMENT



APPLY MECHANISTIC MODELS TO INFORM NEW EXPERT SYSTEMS

<div> <div>Organ</div> <div>Mechanism</div> <div>   </div> </div>	Pancreas	GI Tract	Liver	Lungs
Inflammation (Immune system: innate, autoimmune)	Acute Pancreatitis / RAP	Gastroenteritis / colitis / IBD	Hepatitis, NASH	Bronchitis, (Cystic fibrosis)
Fibrosis (Immune system)	Chronic pancreatitis	Crohn's Ulcerative colitis (UC)	Liver cirrhosis	COPD IPF
Pain (nerves, brain) <ul style="list-style-type: none"> - Inflammatory - Neuropathic - Affective 	50% severe pain, 25% moderate pain	"Functional" bowel syndrome, chronic pain	NA	Dyspnea
Organ Dysfunction (epithelial cells, etc)	Maldigestion, Diabetes mellitus (Type 3C)	Diarrhea, Bowel obstruction, # Surgeries.	Portal hypertension, synthetic dysfunction	Cough, pneumonia, hypoxemia
Cancer (linked to inflammation)	Pancreatic ductal adenocarcinoma	Colorectal cancer (with UC)	Hepatocellular carcinoma	Lung cancer

DEMAND IS GROWING RAPIDLY: RAISING SERIES A LATE 2019

PROPRIETARY LONGITUDINAL PATIENT DATABASE
AND GENETIC REPOSITORY



Patient Diagnosis & Management
Genetic test already reimbursed by multiple insurance payers

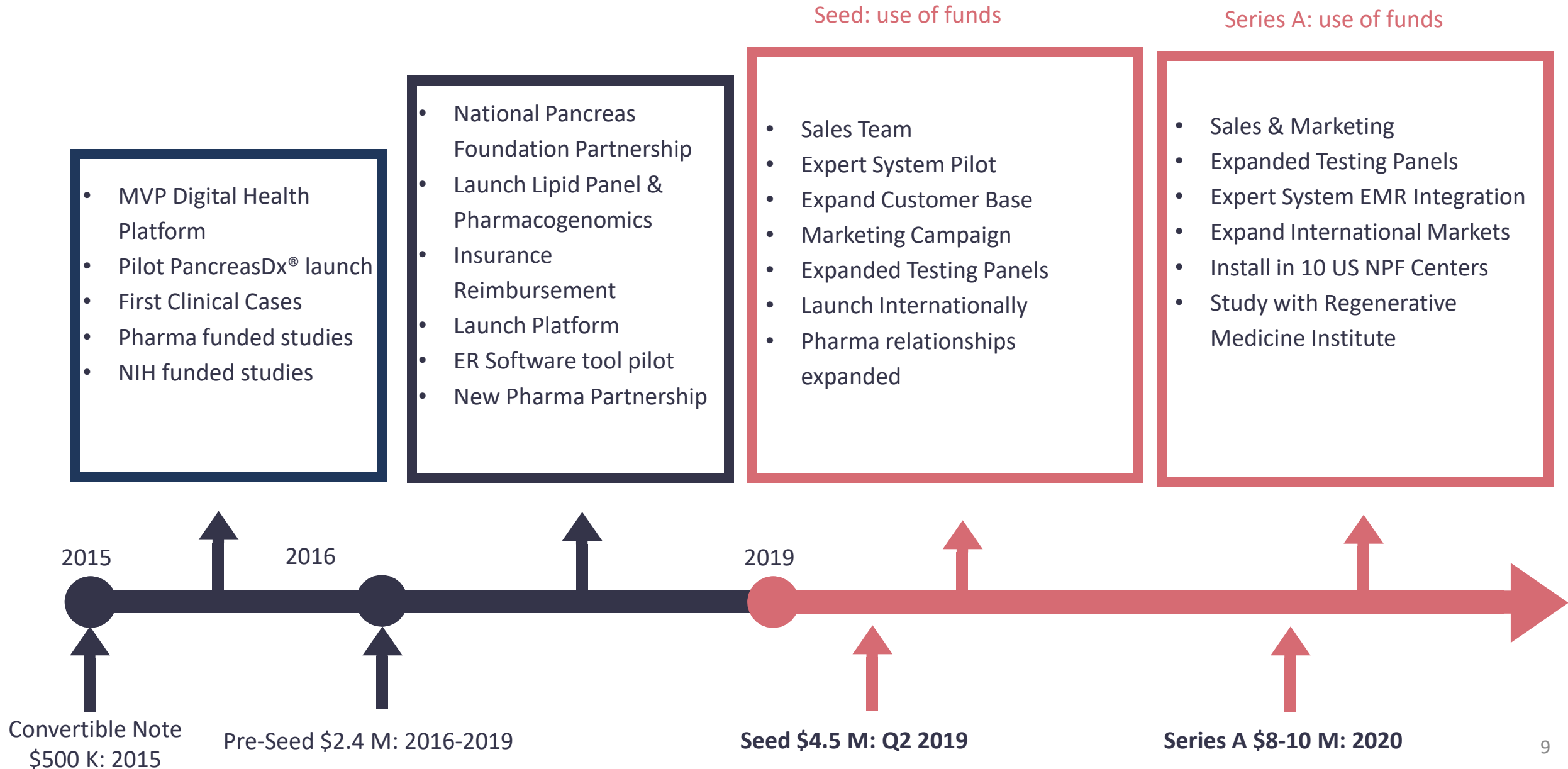


Analytics & Software Tools
Tiered licensing for Expert system



Pharma Partnerships
Seeking additional partnerships for trials
Licensing targeted genetic therapies

MILESTONES



OUTSTANDING, MULTIDISCIPLINARY TEAM



JESSICA GIBSON, MBA
PRESIDENT, CEO



MARK HAUPT, MD
CHIEF MEDICAL OFFICER



MICHAEL HARRIES
PHD
ACTING CTO



TORY MOORE, CFA
CFO



JESSICA LARUSCH, PHD
LEAD GENETIC SCIENTIST



WENDY FEIGEL, MHS
DIRECTOR OF OPERATIONS



DAN SPAGNOLO, PHD
COMPUTATIONAL SYSTEMS
BIOLOGIST



JONATHAN VELEZ, MSIS
SOFTWARE ARCHITECT



CAMERON BREZE
BIOMEDICAL TECHNOLOGIST



KATYA ORLOVA, MS, CGC, PHD
VARIANT SCIENTIST



SOLOMON ADAMS, PHARM.D, PHD
PHARMACOGENOMICS EXPERT



CELESTE SHELTON CGC, PHD
VARIANT SCIENTIST

BENEFITS IMPACT MULTIPLE STAKEHOLDERS

"For the first time I feel like there is hope."

PATIENT

"I have proof that this is not in my head, there is something really causing this."

PATIENT

"Ariel Precision Medicine's PancreasDx is a major improvement over standard commercial tests."

PHYSICIAN

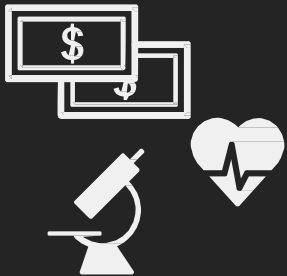
"This is what has been needed to help me treat my patients"

PHYSICIAN

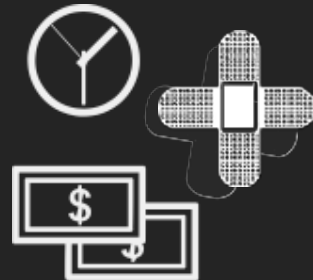
"Ariel is putting out new information that is changing the way I look at my patients."

PHYSICIAN

PAYERS



PATIENTS



PHYSICIANS



PHARMA



Thank You!

ARIEL

Jessica M. Gibson

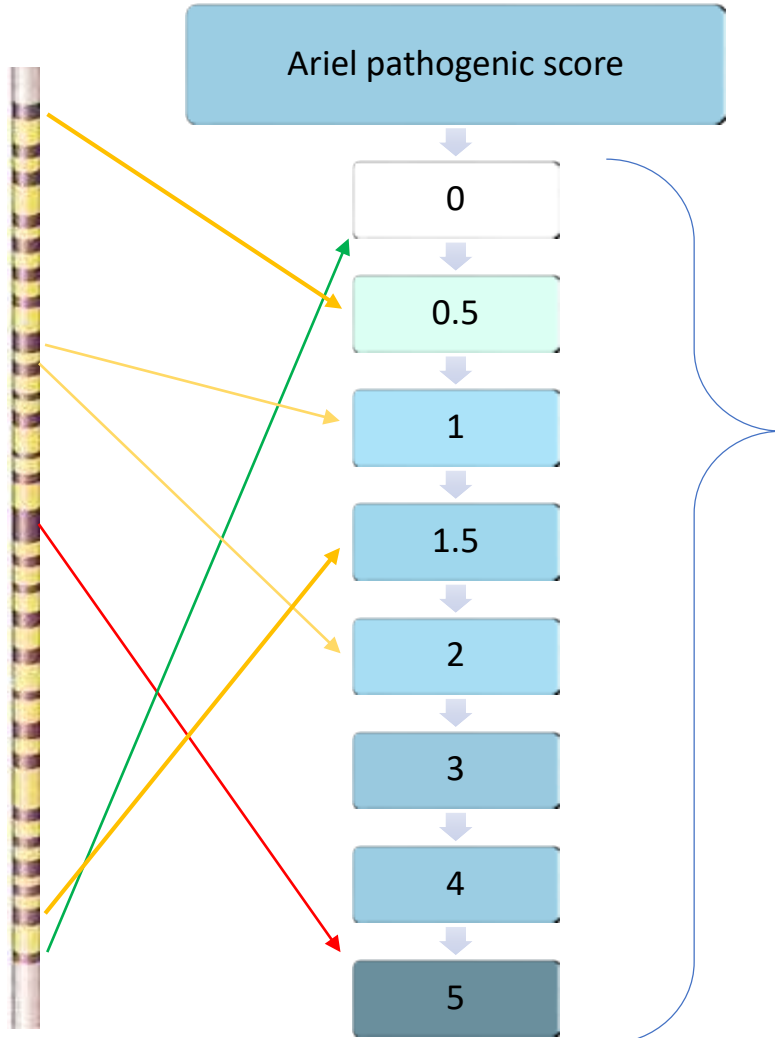
gibson@arielmedicine.com

5750 Centre Ave, Pittsburgh, PA

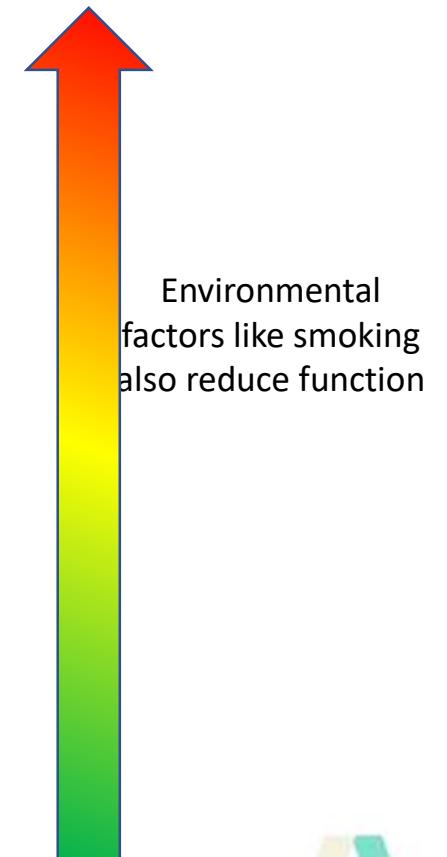


EXAMPLE OF THE EXPERT SYSTEM FOR CFTR

CFTR Gene

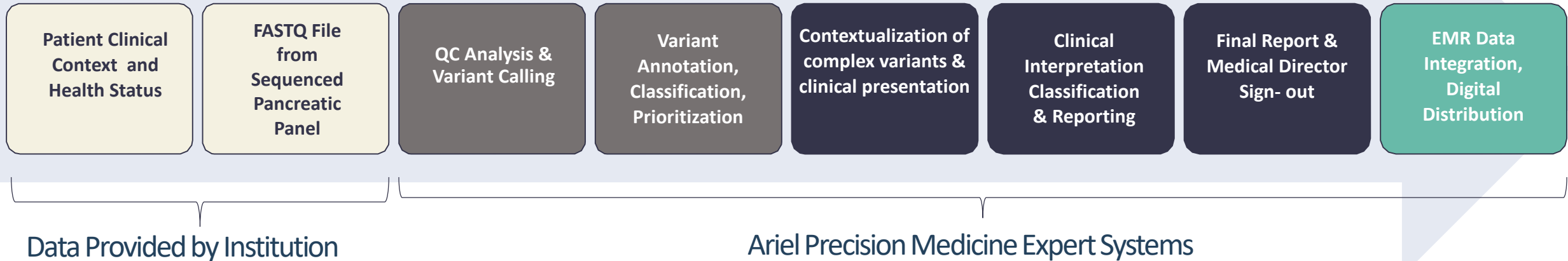


Sweat Test	Classical Phenotype	Molecular Phenotype
60+	Classical cystic fibrosis Bronchiectasis, pancreatic insufficiency, male infertility, hepatic cirrhosis	Severe
75% Dysfunction	Meconium ileus, pancreatic insufficiency, mild chest disease	Abnormal CFTR
50% Dysfunction	Bronchiectasis, pancreatic sufficiency, male infertility	
	Mild chest disease, polyposis, pancreatic sufficiency	
	Sinusitis, CBAVD	
25% Dysfunction	Azoospermia	Mild



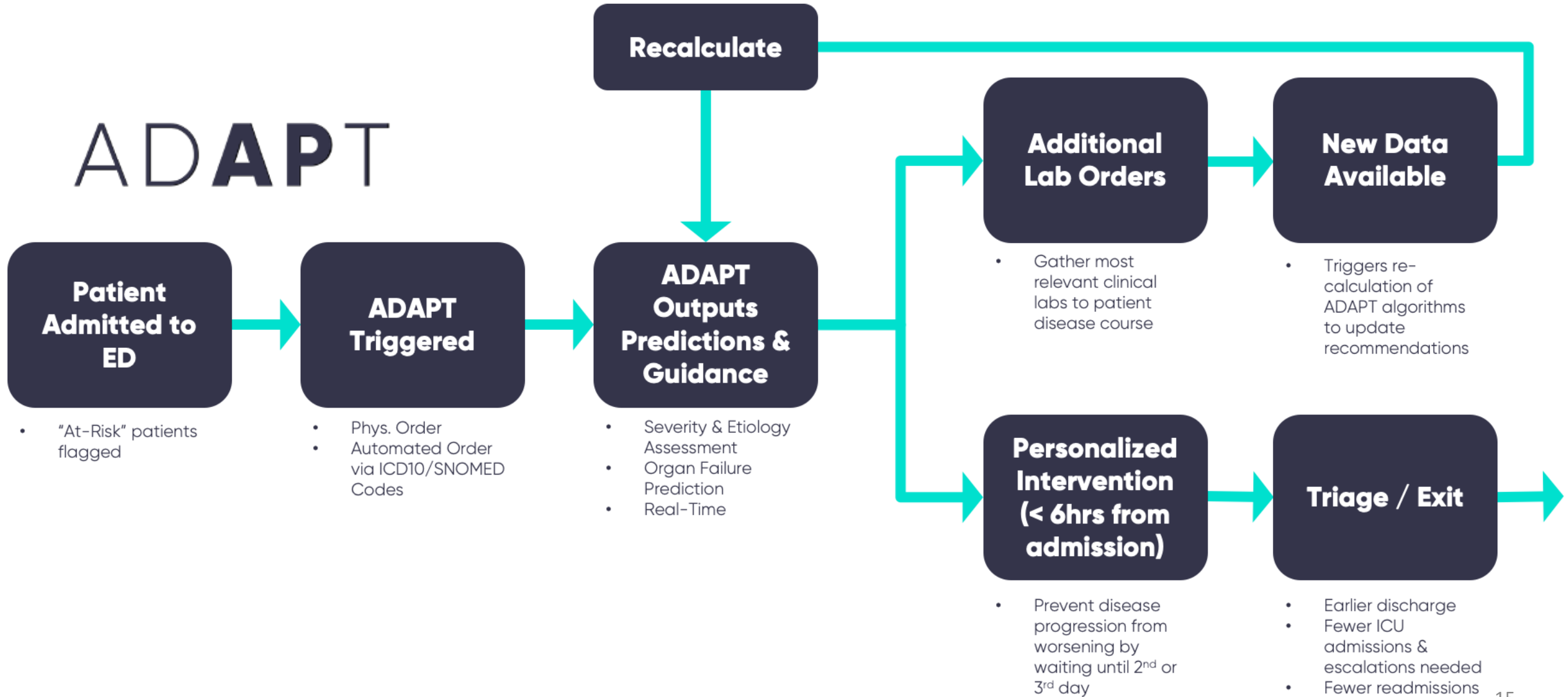
Ariel Precision Medicine Technology + Services

Advanced Clinical Support



- Reports assembled & evaluated by multidisciplinary team of geneticists, variant scientist, expert physicians & genetic counselors, providing most advanced insights into report
- Save significant personnel time & effort by leveraging Ariel Platform
- First to offer clinical insights focused on aggregate impact of each patient's environment & genetic burden
- Receiving institution benefits from domain knowledge & evidence curated by dedicated team of pancreatic disease experts
- Analysis, clinical interpretation & report generation provided by Ariel

Ariel's Validated Real-time ED Tool



REVENUE SCENARIOS

