Advanced Genomics Platform for Next-Generation Cancer Therapies

Personalis®

Investor Presentation

August 2021

Forward-Looking Statements

This presentation and the accompanying oral presentation contain forward-looking statements made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. All statements other than statements of historical fact contained in this presentation, including statements as to future results of operations, financial condition, business strategy, plans, and objectives of management for future operations of Personalis, Inc. ("Personalis" or the "Company"), future market sizes, potential success of personalized cancer therapies and other drugs, the developing and potential competitive landscape for genomic sequencing platforms, and others, are forward-looking statements. These statements involve known and unknown risks, uncertainties, assumptions and other factors that may cause the Company's actual results, performance or achievements to be materially different from any future results, performance or achievements, such as the impact of the COVID-19 pandemic on the business and operations of the Company and its customers, expressed or implied by the forward-looking statements. These forward-looking statements are subject to risks and uncertainties, including those discussed in Personalis' filings with the Securities and Exchange Commission ("SEC"), including in the "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" sections of the Company's most recently filed periodic reports on Forms 8-K, 10-K and 10-Q, and in the documents incorporated by reference therein.

In some cases, you can identify forward-looking statements because they contain words such as "anticipate," "believe," "contemplate," "continue," "could," "estimate," "expect," "intend," "may," "plan," "potential," "predict," "project," "should," "target," "will," or "would," or the negative of these words or other similar terms or expressions. These statements are only predictions. Personalis has based these forward-looking statements largely on its current expectations and projections about future events and financial trends that it believes may affect its business, financial condition and results of operations. Also, these forward-looking statements represent the Company's estimates and assumptions only as of the date of this presentation. The Company assumes no obligation to update any forward-looking statements after the date of this presentation, except as required by law.

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Investment Highlights

Large market of ~$40B for biopharma research, clinical and companion diagnostics, and population sequencing

Market-leading immuno-oncology biomarker platform for tissue & liquid biopsies

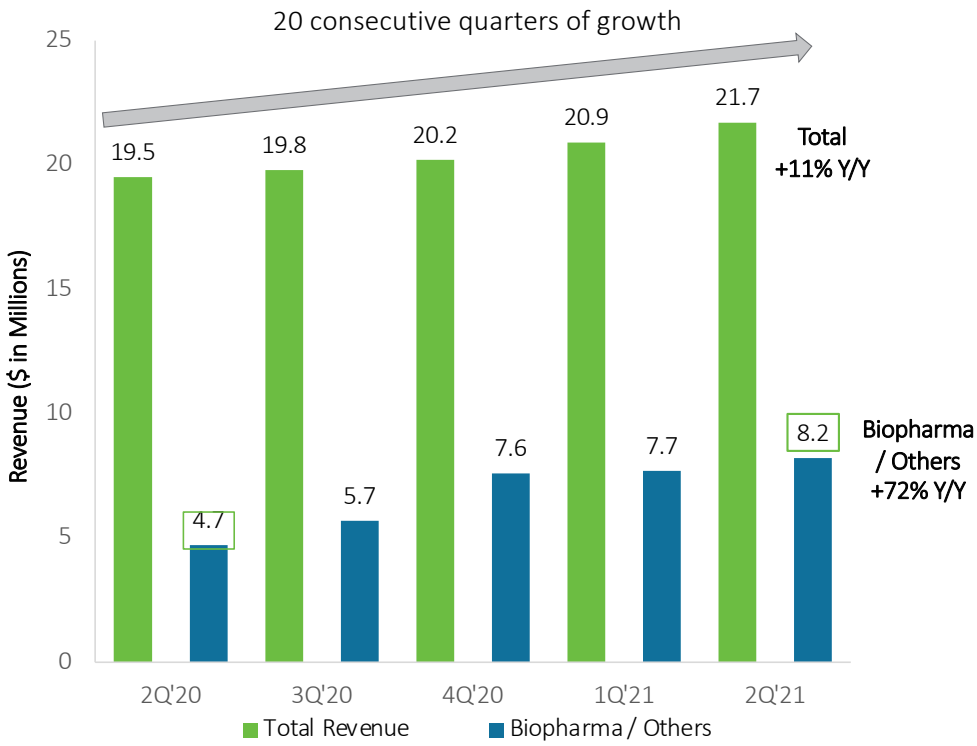
Growing NeXT platform adoption by large pharma and advanced biotech companies, including as a partner for prospective therapy development

Attractive historical growth and strong cash position

Proven scale with ~200,000 samples sequenced to-date

2Q 2021 Highlights

- Achieved record quarterly revenues of $21.7M in Q2 2021 (+11% YoY growth)
- ~72% YoY preliminary biopharma revenue growth, fueled by strong adoption of NeXT by both new and existing customers
- Initial pilot orders have increased on average from $50K range in 2018 to hundreds of thousands of dollars
- Achieved milestone of delivering more than 125,000 whole human genome sequences to the VA MVP
- Cash, cash equivalents, and short-term investments was $328.9M as of 6/30/2021



2020-2021 Accomplishments

Key Highlights

50+ Customers have placed orders for NeXT as of 2Q 2021

4 New Product Offerings in 2020

Commercial team has grown 100% since the IPO and 30% in 2020 alone

Multiple New Partnership and Collaborations

11% YoY Revenue Growth in 2Q 2021

Completed 125,000+ Whole Genomes for VA MVP

Increased Momentum and Adoption by Biopharma Customers

Key Customer Wins and Partnerships

- Customers include a majority of the top ten oncology pharma
- Collaboration with Merck KGaA to identify and develop novel biomarkers for cancer therapies
- CDx partnership with MapKure ,LLC, (JV of Beigene, Ltd.)
- Scientific collaboration with Sarepta Therapeutics for rare disease
- Partnership with Natera to provide exome sequencing services for personalized test
- Partnership with Berry Genomics for China lab expansion

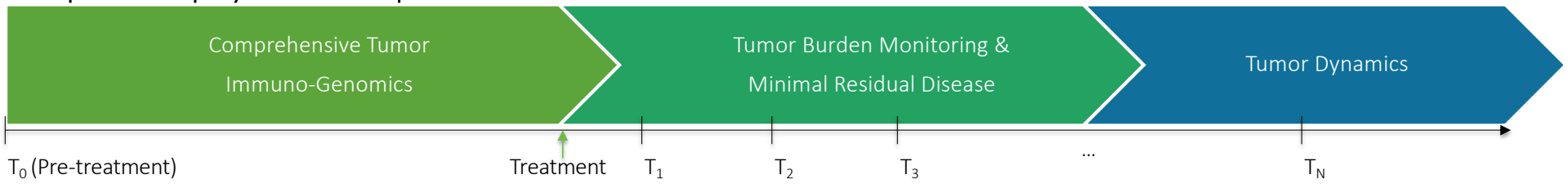
New Product Offerings

- NeXT Liquid Biopsy, exome-wide liquid biopsy platform (launched)
- NeXT Personal, also from liquid biopsies (2021 planned launch)
- Cancer whole genome sequencing services (launched 2019); future option to identify ~ 20x more variants for NeXT Personal
- NeXT Dx Test, a comprehensive genomic cancer profiling test enabling advanced composite biomarkers for cancer treatment
- NeXT SHERPA and NEOPS neoantigen prediction capability

2021 Strategic Priorities

- Drive continued growth of NeXT platform and population sequencing with both new and existing customers
- Continue to drive the expansion of our multiple liquid biopsy offering, including:
    - NeXT Liquid Biopsy which was launched in August 2020 and has received several initial customer orders in 2020 with first customer delivery in 1Q 2021
    - Expect to launch of NeXT Personal (MRD Liquid Biopsy offering) in 2021
- Continue to invest in infrastructure and ramp up efforts to obtain clinical and regulatory approval for NeXT Platform
- Continue to enhance and display clinical utility of the NeXT Platform through collaborations
- Expansion of facility capacity and operational footprint
- Expand footprint in China and deepen relationships with the local scientific and regulatory community

Liquid Biopsy Roadmap



ImmunoID NeXT Or NeXT Dx

- ~20,000 genes
- DNA and RNA Seq
- Tumor & Immune
- Tumor & Normal
- Whole Genome (future option)

Identify up to thousands of mutations; design panel.

NeXT Personal

(in early R&D)

- Personalized tumor tracking for each patient
- Up to thousands of mutations
- High sensitivity
- May use less plasma

NeXT Liquid Bx

- New mutations
- Acquired Mechanisms of Resistance
- Biomarker dynamics
- Tumor Dynamics

Overview of Recently Launched NeXT Liquid Biopsy Platform

Platform Highlights

- Monitors 20,000 genes, or about 40x more genes than the majority of liquid biopsy cancer panels on the market
- Ability to track mutations and detect new mutations over time in response to treatment
- Capabilities will help biopharmaceutical companies advance their understanding of tumor biology, including resistance mechanisms, to aid the development of next-generation cancer therapies

Strategic Importance

- Expands TAM into liquid biopsy market
- First product in Company's liquid biopsy product portfolio
- Liquid biopsy results can be paired with NeXT Platform tissue results and provide an unprecedented breadth of data from limited tumor sample
- Comprehensiveness matters for biopharma customers

Several customer orders received with additional discussions ongoing

Company Overview

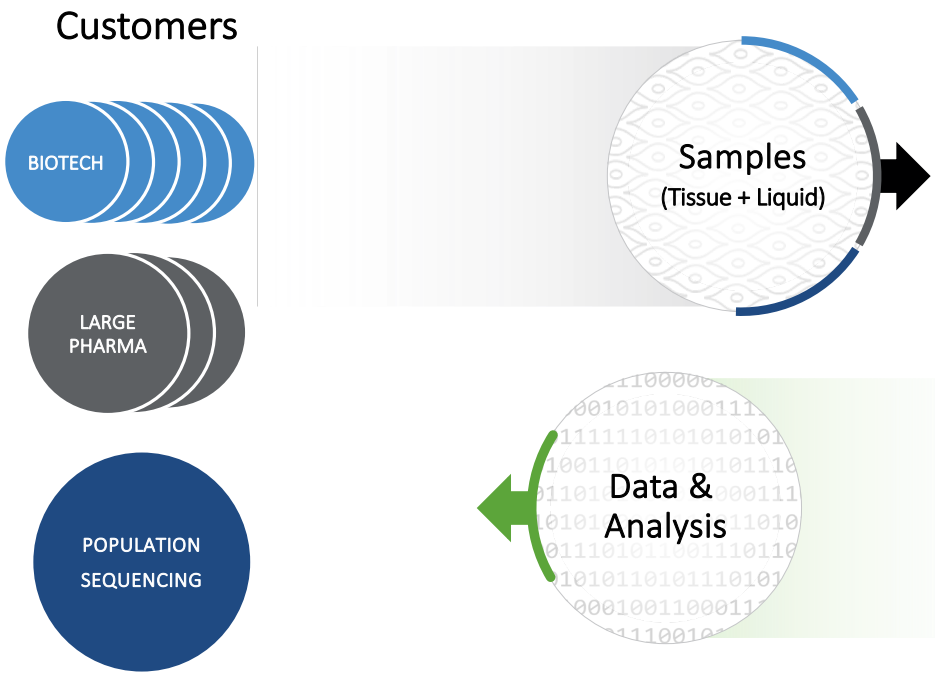
Personalis®

Cancer drug development & population sequencing are increasingly about data…

… and Personalis is positioned to be a key part of that ecosystem

Personalis Provides Proprietary Genomic Information to Customers

Efforts to develop better cancer drugs increase demand for genomic information



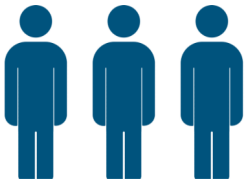
Personalis®

- Proprietary Sample Prep & Chemistry
- Proprietary Sequencing Methods
- Machine Learning and Analytics
- Operational Excellence & Scale

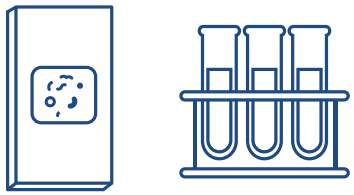
Personalis is Transforming the Development of Next-Generation Cancer Therapies

Providing biopharma with more comprehensive molecular data about patient tumors

Patients



Tumor Samples



Comprehensive Molecular Data

~20,000

TUMOR GENES + IMMUNE SYSTEM

Customer Base

50+

BIOPHARMA CUSTOMERS as of 2Q'21
NO REIMBURSEMENT

Substantial Growth

2020 REVENUE: **$78.6M** (+21% YoY)
2Q'21 REVENUE: $21.7M (+11% YoY)

WITH CAPITAL-EFFICIENT BUSINESS MODEL

Large Market

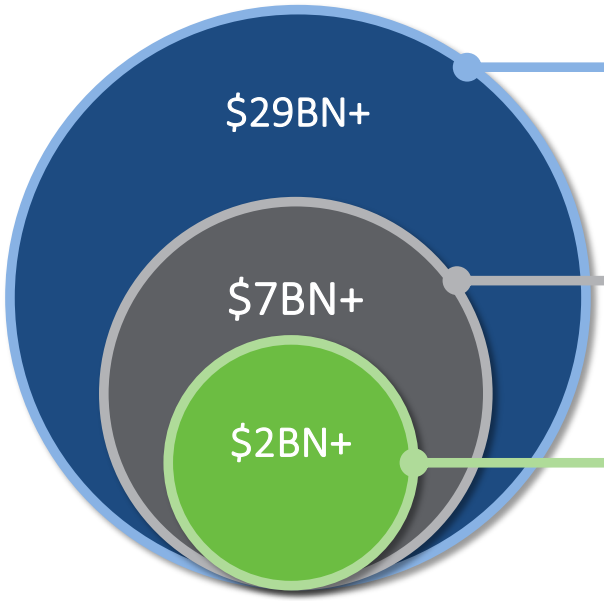
~$40 billion

ESTIMATED TAM WITH BIOPHARMA, Dx, CDx, AND POPSEQ CUSTOMERS [1]

Notes:
1. Reference page 13 and page 14 for TAM

Large Market Opportunity Across Therapy Selection, Monitoring, Clinical Trials, and Population Sequencing

Comprehensive Product Offering in ~$40BN Current TAM Categories



Therapy Selection & Monitoring: 2M diagnosed patients treated actively per year needing initial tissue test for therapy selection and in-depth monitoring, represents $6BN [1] and $22.7BN [2] opportunity, respectively

Clinical Trial Patients: 200k clinical trial patients needing an initial tissue test and in-depth monitoring represents $7BN opportunity with pharma [3]

Population Sequencing: Current TAM of $2BN [4]

Notes:

1. Company estimate based on 2 million diagnosed cancer patients requiring an initial tissue test at a price of ~$3,000 per test.
2. Company estimate based on 2 million diagnosed patients requiring in-depth monitoring at a test price of $2,840 per test at a frequency of four times a year
3. Company estimate based on 200,000 clinical trial patients requiring an initial tissue test at a price of ~$3,000 per test and in-depth monitoring at a price of ~$4,000 per test at a frequency of eight times per year.
4. Company estimate based on its VA MVP genome sequencing pricing and 2 million individuals per year, based on publicly available reports of population sequencing projects covering over 14 million individuals and an assumed 7-year average project duration.

Therapy Selection, Monitoring, Clinical Trials TAM Build-Up

	Estimated # of Cancer Patients	x Assumed Testing Needed	x Indicative Price	= Market Opportunity
Clinical Trial Patients	200k/Year [1]	1 Initial Tissue Test	~$3,000 [5]	**~$600M**
		8x/yr in-depth monitoring [3]	~$4,000 [3]	**~$6.4BN**
Therapy Selection	2M/Year [2]	1 Initial Tissue Test	~$3,000 [5]	**~$6BN**
Monitoring	2M/Year [2]	4x/yr in-depth monitoring [4]	~$2,840 [6]	**~$22.72BN**

Notes:

1. Estimated 200,000 enrolled in clinical trials based on Company review of ClincialTrials.gov data.
2. U.S. National Cancer Institute estimate that 2.2 million patients are actively receiving care. 2 million per year, net clinical trial patients.
3. Company estimate for pricing is based on the Company's historical standard pricing for tissue samples and anticipated pricing for liquid biopsy samples. Company estimate for frequency is based on frequency of monitoring in a clinical trial protocol used by Merck in a recent immune-oncology drug trial and assumes that monitoring would occur every six weeks.
4. Company estimate based on expected usage for Signatera, a personalized circulating tumor DNA monitoring assay to support optimal cancer treatment planning, reported by Natera on its Q2 2020 earnings call.
5. CMS payment rate for tissue-based cancer diagnostic test – based on CPT code 81455.
6. Currently no approved pricing for monitoring in cancer, but given the technical similarity to Natera's kidney transplant rejection monitoring test, Prospera, which also monitors cell free DNA from blood plasma and which receives coverage at $2,840, based on assumption that similar coverage could be sought for cancer monitoring genetic tests not currently subject to coverage.

Operational Excellence

~200,000 human samples
sequenced to date

Significant focus on process development
including with laboratory automation, to drive margin expansion

Differentiated QMS and Regulatory Credentials
CLIA / CAP, NY State[1] & FDA[2] - all at exome scale

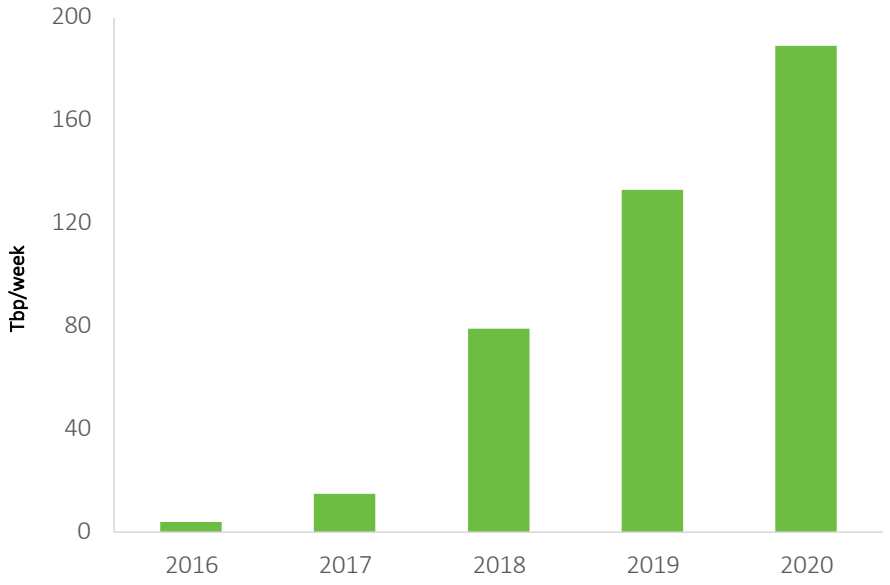
Headquartered
in Menlo Park, CA

275+ employees

Specialized commercial team has grown 100% since IPO

Intellectual Property Protection
including 13 issued U.S. and 2 issued foreign patents

Growth of Personalis' Sequencing Capacity
Sequencing capacity at Q1



Equipment sequencing capacity as of Q1 each year

Notes:
1. We maintain a current license with the New York State Department of Health for our laboratory
2. We have filed a Device Master File with the FDA.

Experienced Leadership Team

John West
President, Chief Executive Officer & Director

Richard Chen, M.D., M.S.
Chief Scientific Officer

Stephen Moore
General Counsel

Aaron Tachibana
Chief Financial Officer

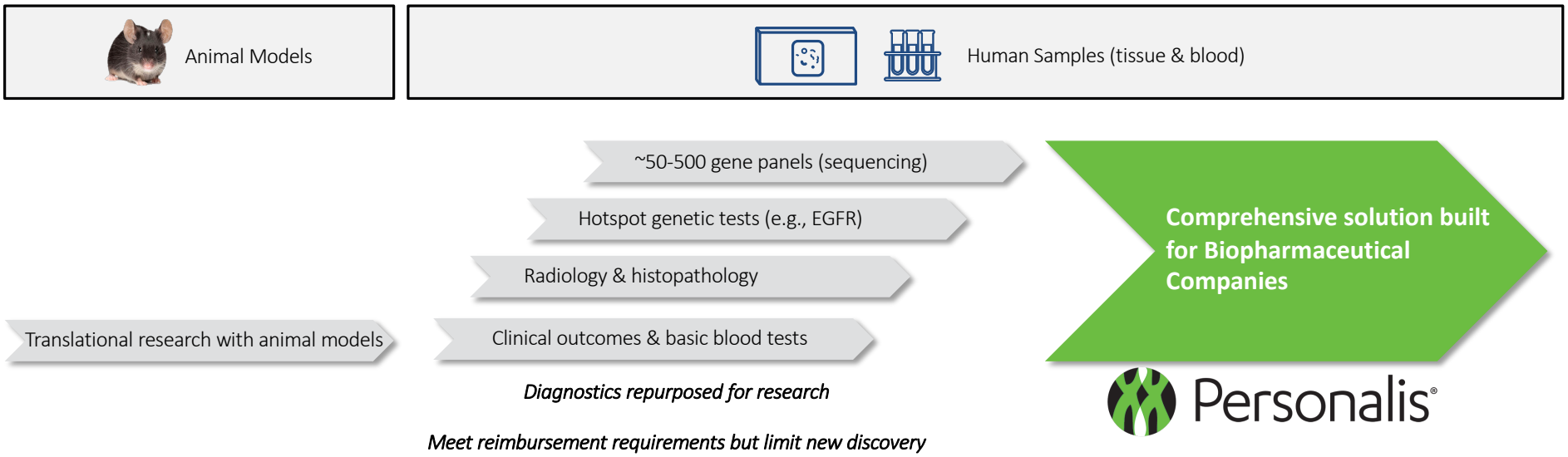
MANAGEMENT TEAM						
Christian Haudenschild, Ph.D.	VP Operations	illumina	Solexa	LYNX		
Stephane Mouradian	VP Business Development	illumina	Caliper			
Susan Moriconi	VP People & CHRO	Omnicell	Boston Scientific			
Carol Tillis	VP Finance and Administration	Molecular Dynamics	PACBIO			
Rena McClory, Ph.D.	VP Marketing	illumina	Agilent	RainDance	applied biosystems	
Lloyd Hsu	VP Software Engineering	Informatica	TIBCO			
NON-EMPLOYEE DIRECTORS						
Jonathan MacQuitty, Ph.D.	Chairman of the Board	Lightspeed	Forty Seven			
A. Blaine Bowman	Director	illumina	DIONEX			
Alan Colowick, M.D.	Director	SOFINNOVA	AMGEN	Celgene	Human Longevity	
Karin Eastham	Director	illumina	veracyte	NEKTAR	geron	
Kenneth Ludlum	Director	CareDx	natus	IRIDEX		
Woodrow Myers, M.D.	Director	BlueCross BlueShield	HAVENCREST	CORIZON		

Oncology

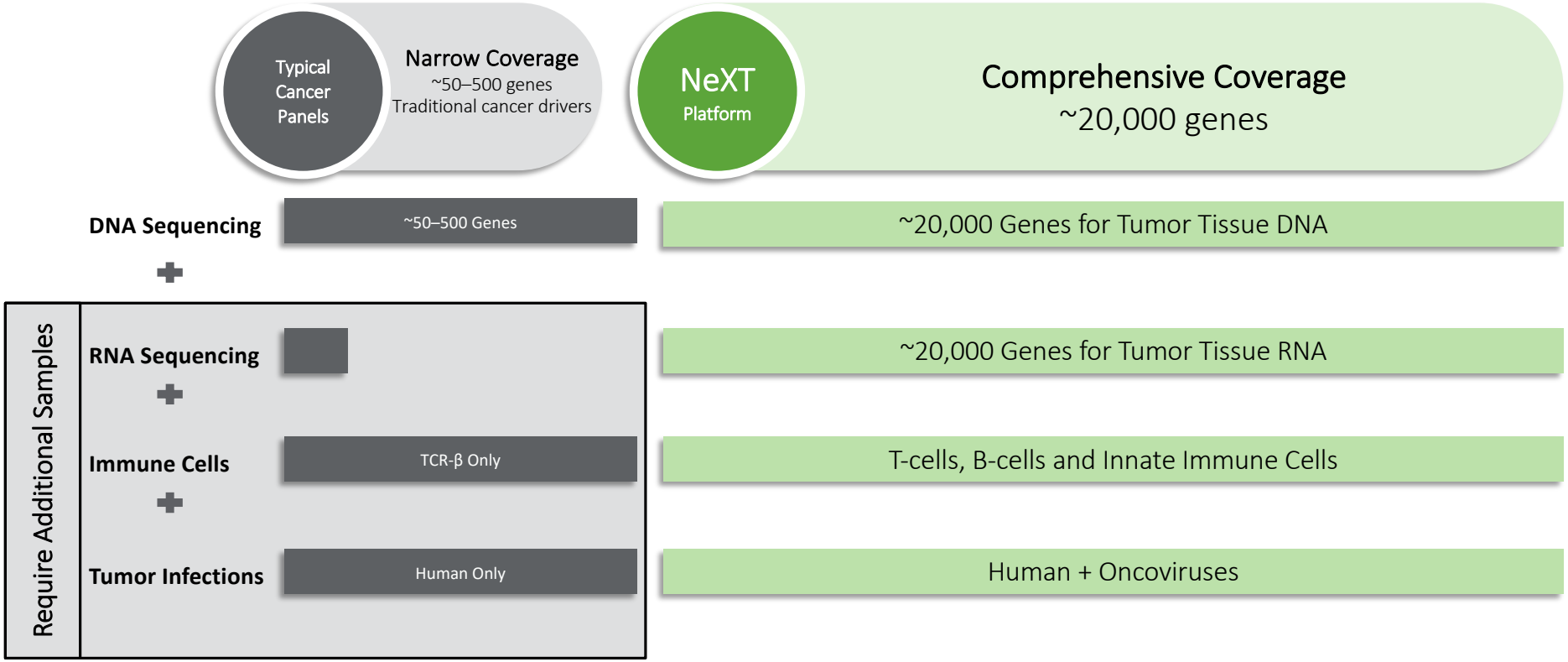
Personalis®

Personalis is Purpose-Built for Biopharma

Our comprehensive solution represents the next step in biopharmaceutical research



Diagnostic Panels Utilize Human Tissue But Aren't Comprehensive



Proprietary Platform Maximizes Insights from a Single Sample

Patient Tumor Samples Are Often Extremely Limited

Traditional Process

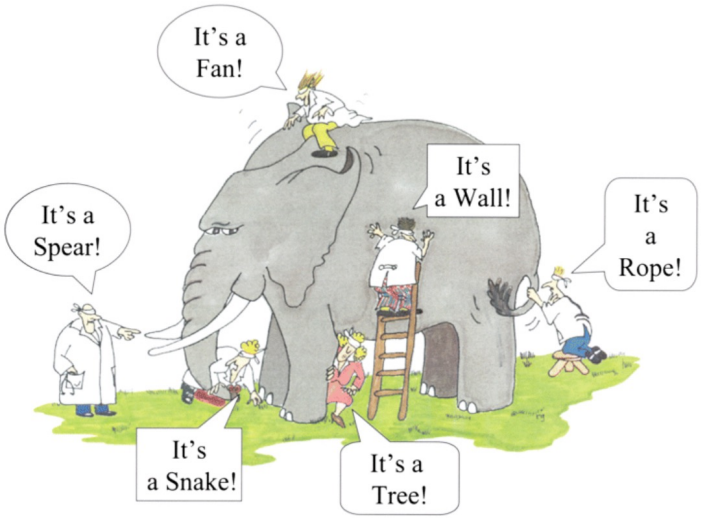
Multiple Samples | Multiple Vendors | Multiple Assays

- Targeted Therapy Panel (often 50 to 500 genes)
- Neoantigen Identification from Exome
- Expression Data from Array
- TCR / Immune Cell Repertoire
- MSI-Testing
- Oncoviral Testing
- Remaining Sample, if any, Sent to Discovery and Translational Teams
- HLA-Testing

Personalis®

Comprehensive Data with a Limited Sample
Higher Success Rate and Lower Costs

Personalis Provides a More Complete Picture of the Cancer, Which is Expected to Lead to Improved Clinical Development Success Rates



Viewing a singular aspect of tumor biology limits conclusions

5.1%

The likelihood of FDA approval from Phase I clinical trial for oncology developmental candidates[1]

Note:
1. Biotechnology Innovation Organization (BIO), Biomedtracker, and Amplion "Clinical Development Success Rates 2006-2015" (Jun-2016).

Enabling Comprehensive Data for Precision Medicine

Clinical Trials

Translational Research & Clinical Trials, Advanced Biomarker Discovery

Diagnostics

Path from Translational Research to CDx on the Same Platform

Biobanks & Databases

Enabling Comprehensive Tumor Immuno-Genomics Database

Personalized Diagnostics & Therapies

Genomics Engine for Personalized Cancer Therapies & Diagnostics

Proprietary Assay and Analytics for the Many Elements of Tumor Biology

ImmunoID NeXT

	DNA & RNA Coverage over 20,000 genes	Neoantigens	Tumor Escape & Immuno-modulators	HLA Type & Mutations	Immune Repertoire	MSI	Oncoviruses	Immunocellular Deconvolution	Diagnostic Report
Proprietary Assay & Content	ACE assay technology enhances accuracy	ACE assay technology Proprietary mass spec data	ACE assay technology	Proprietary design to enhance accuracy	Proprietary design boosts CDR3	Enhancement in MSI regions not covered by exomes	Proprietary design	Proprietary RNA signatures*	Boost >1000X in clinical footprint for clinical grade coverage
Proprietary Analytics & Validation	Validated analytics for DNA and RNA mutations True TMB	Proprietary neural networks	Integrated DNA & RNA analytics	Validated high accuracy algorithms	Analytics for TCR and BCR	Both canonical and exome based MSI computation Clinical validation*	Sensitive and specific detection*	Immune cell signature scores*	Clinically validated analytics and reporting*

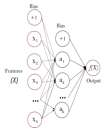
Personalis customers can select features of the platform to meet their particular needs. An * denotes next-generation feature in development.

Differentiated Analytics Driven by Proprietary Content

Engineered cell lines train neural networks to make predictions

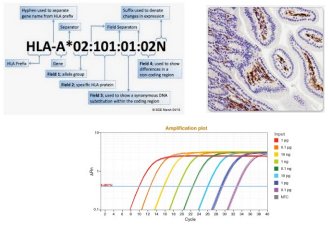
Genetically engineered cell lines

Mass spectrometry



Neural networks

Sequencing approach validated with orthogonal technologies



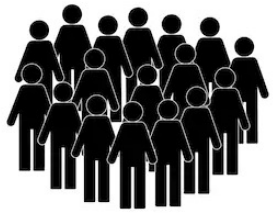
HLA, IHC, QPCR…

Clinical & research collaborations

INOVA

PARKER INSTITUTE for CANCER IMMUNOTHERAPY

Growing database from patient samples



Neoantigen prediction

Foundation for regulatory compliance

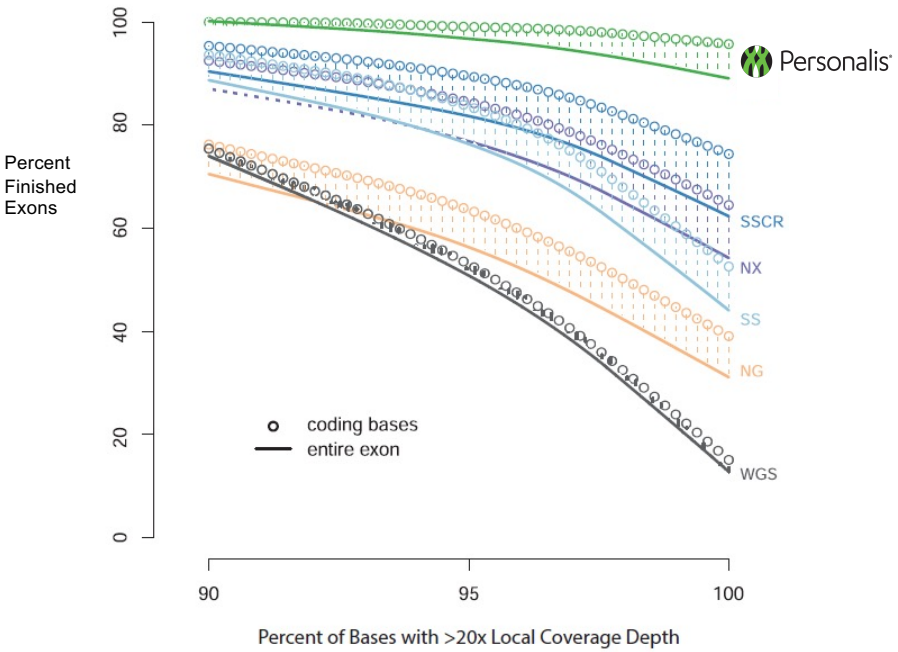
Demonstrate clinical utility of the platform

Provides customer with additional information and opportunity for discovery of unique drug targets

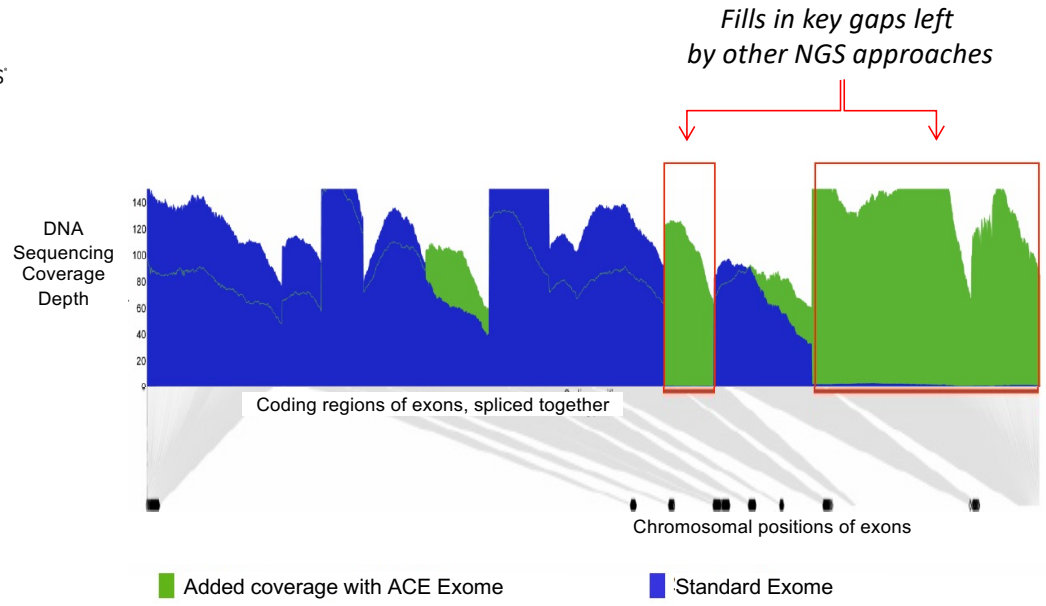
Proprietary Sequencing Methods Achieve Superior Coverage and Gene Finishing

Coverage, depth and accuracy are key in oncology

Superior sequencing performance[1]



Coverage of difficult-to-sequence gene regions



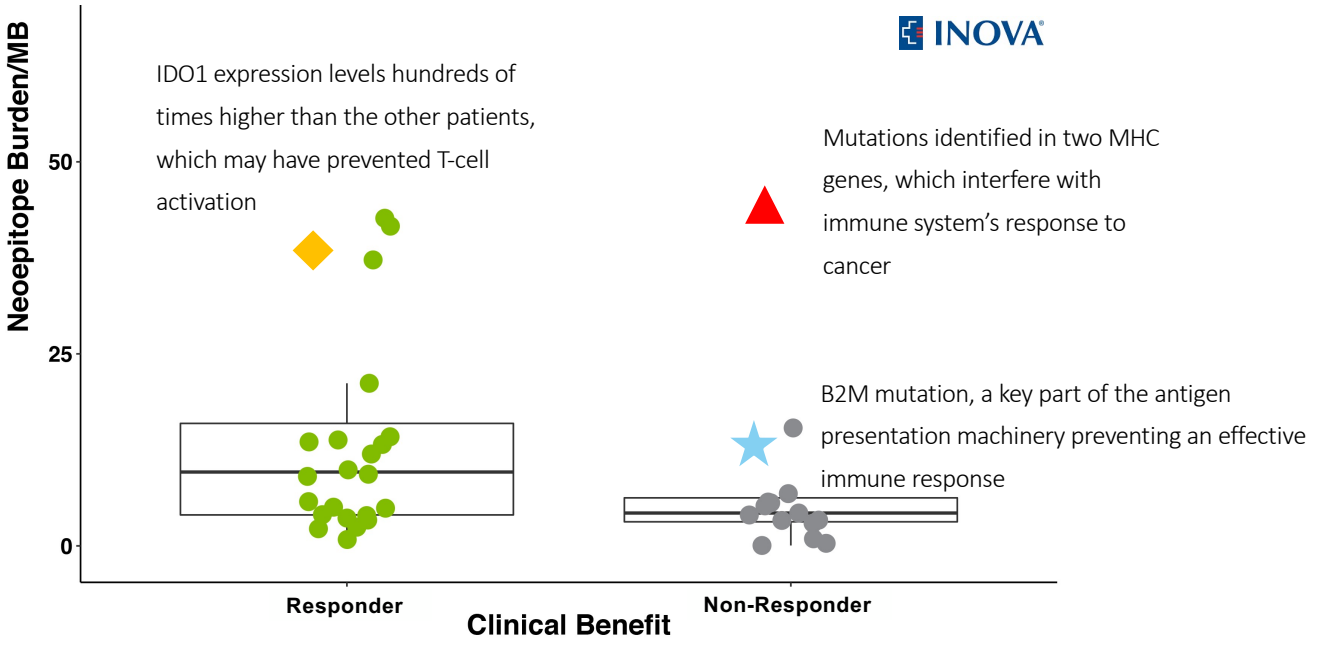
Note:
1. Patwardhan et al. Genome Med. 2015.

Comprehensiveness Allows Customers to Better Understand Why Patients Respond

At an average cost of ~$60,000 per patient in oncology clinical trials,[1] understanding why patients do or don't respond is critical

Improve enrollment criteria in clinical trials

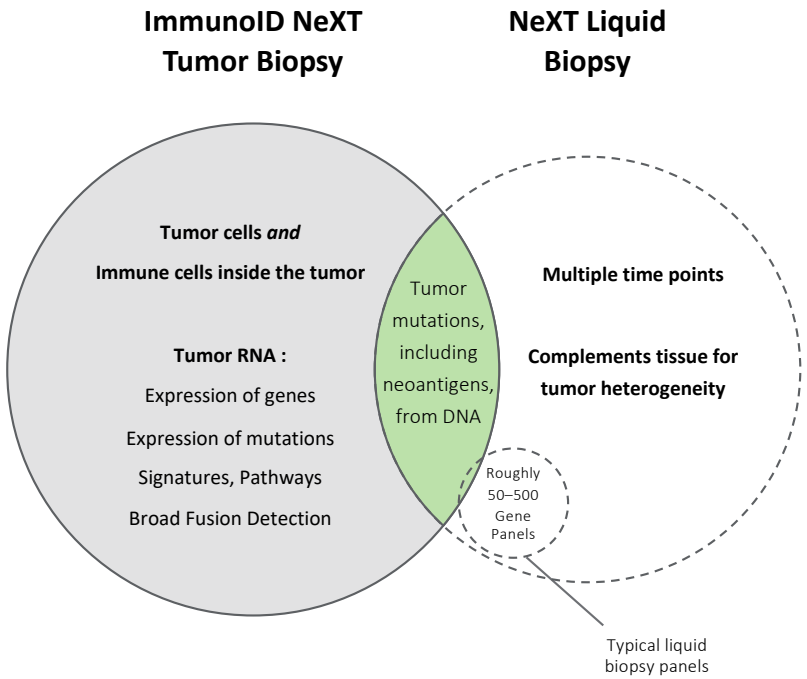
Discover new biological mechanisms underlying therapeutic response and tumor resistance



Note:
1. Biopharmaceutical Industry-Sponsored Clinical Trials: Impact on State Economies, 2013.

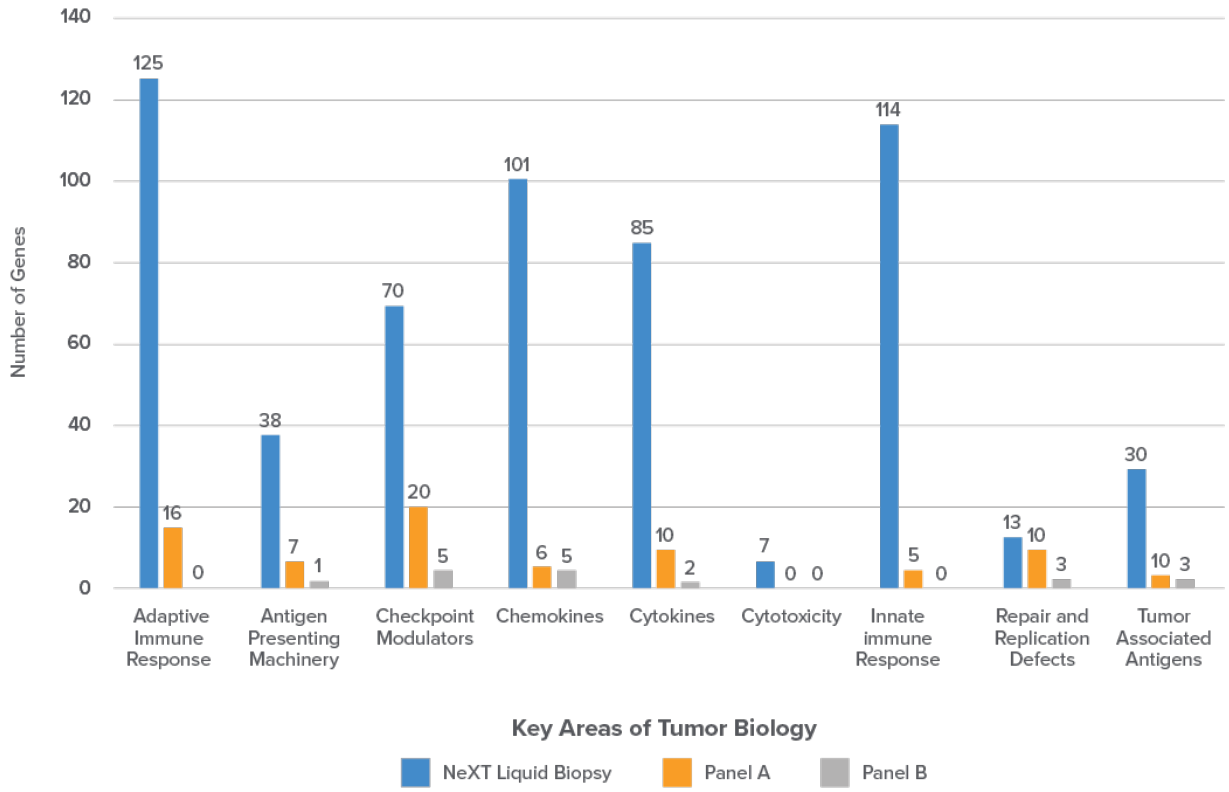
NeXT Liquid Biopsy Capabilities to Complement ImmunoID NeXT Tumor Profiling

Tissue is critical for immune cells and RNA, but cfDNA complements with new insights and serial time points



NeXT Liquid Biopsy (LB) Enables a Broader View of Tumor Biology Compared to Panels [1]

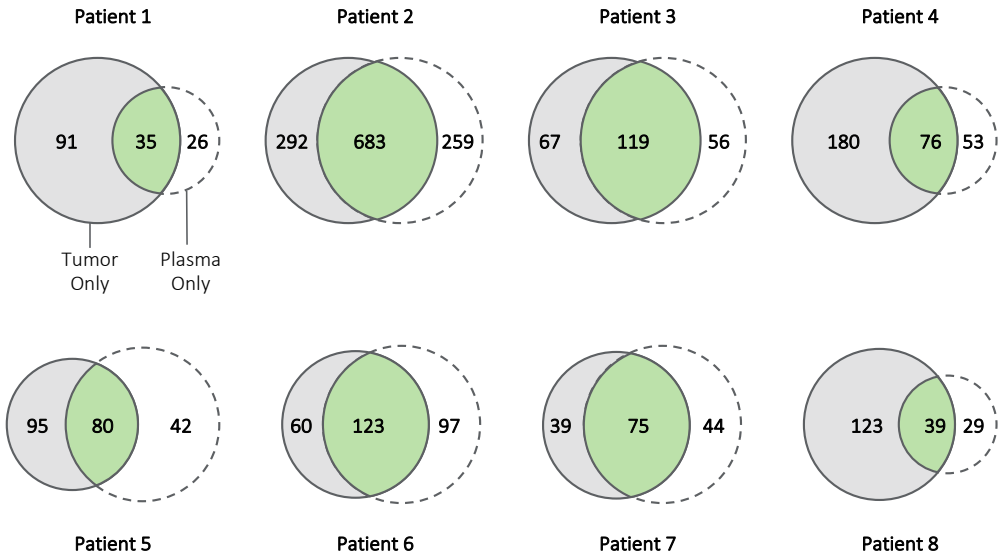
NeXT LB covers substantially more genes relevant to immunotherapy



Note:

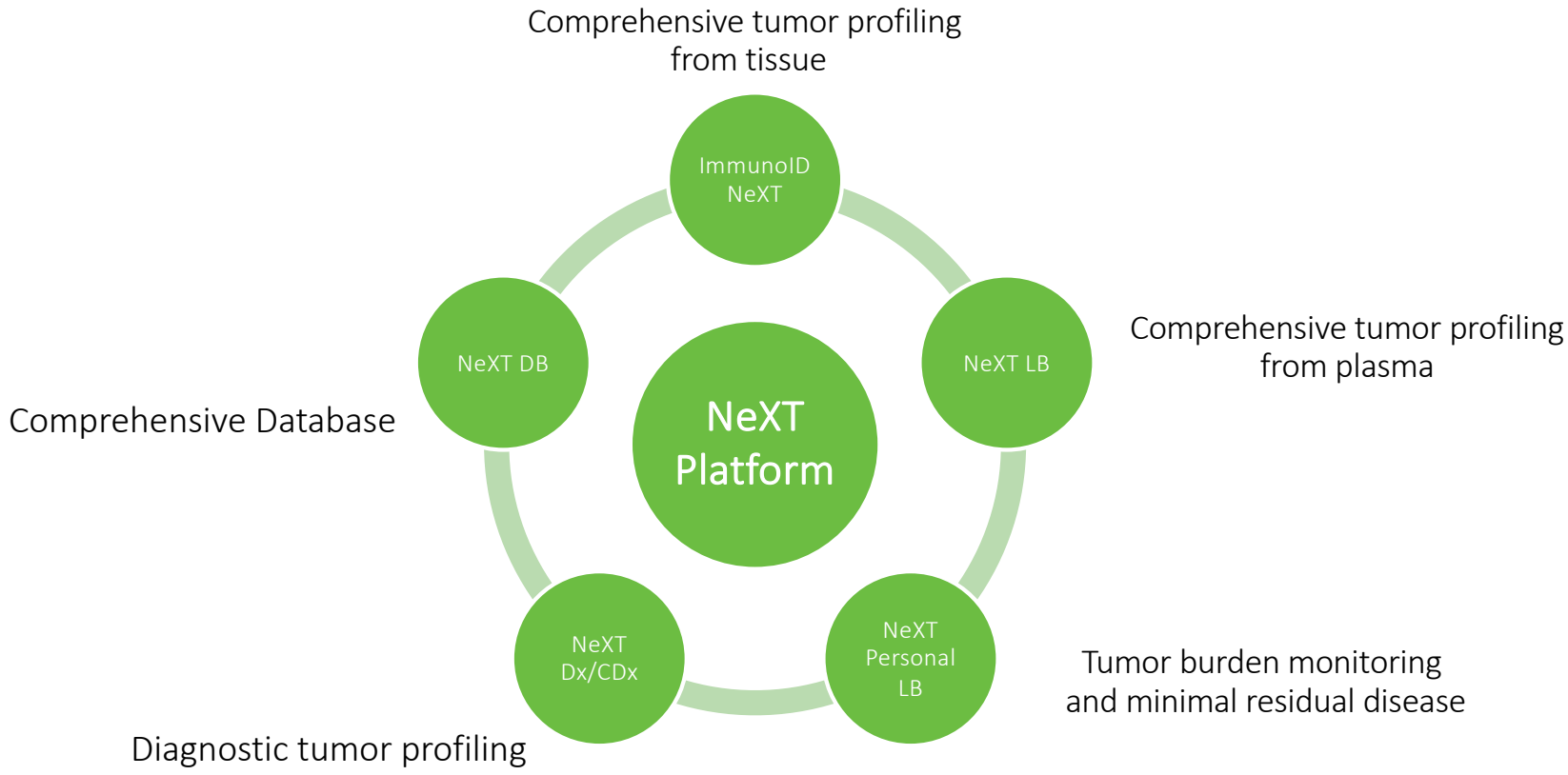
1. Based on the company's comparative analysis of the gene coverage of its Liquid Biopsy product versus the gene coverage of the Illumina TSO500 (Panel A) or the Guardant360 "73-Gene Panel" (Panel B). Gene coverage data for Panel A and Panel B are based on publicly available information from websites.

Mutations Found in Tissue Samples and cfDNA are Important for Drug Development



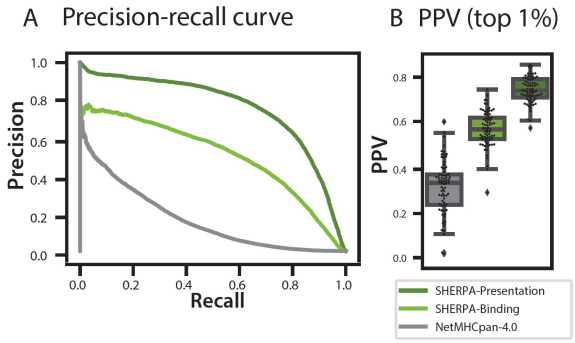
Numbers indicate variants detected in the tumor only, plasma only, or in both.

Creating an Ecosystem of NeXT Products Over Time that Synergize to Drive Value

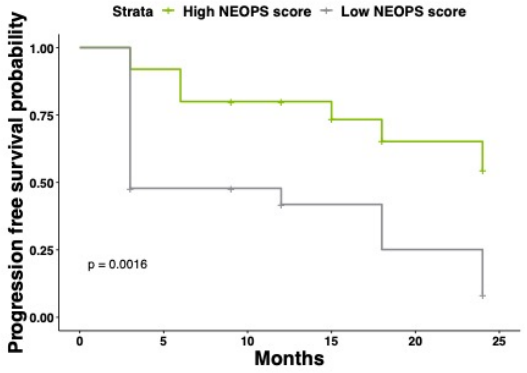


Harnessing Machine Learning For Leading Advanced Analytics & Biomarkers

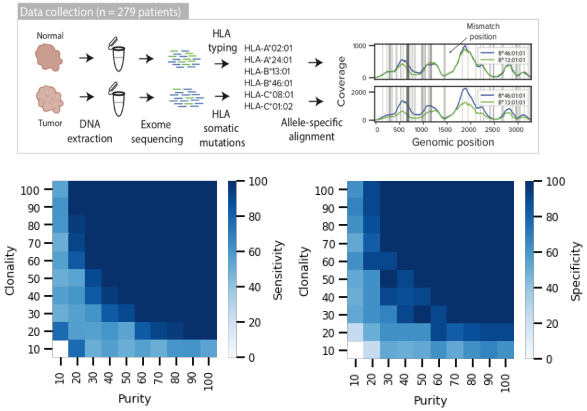
SHERPA Machine Learning Based Neoantigen Prediction



NEOPS Composite Neoantigen Presentation Score

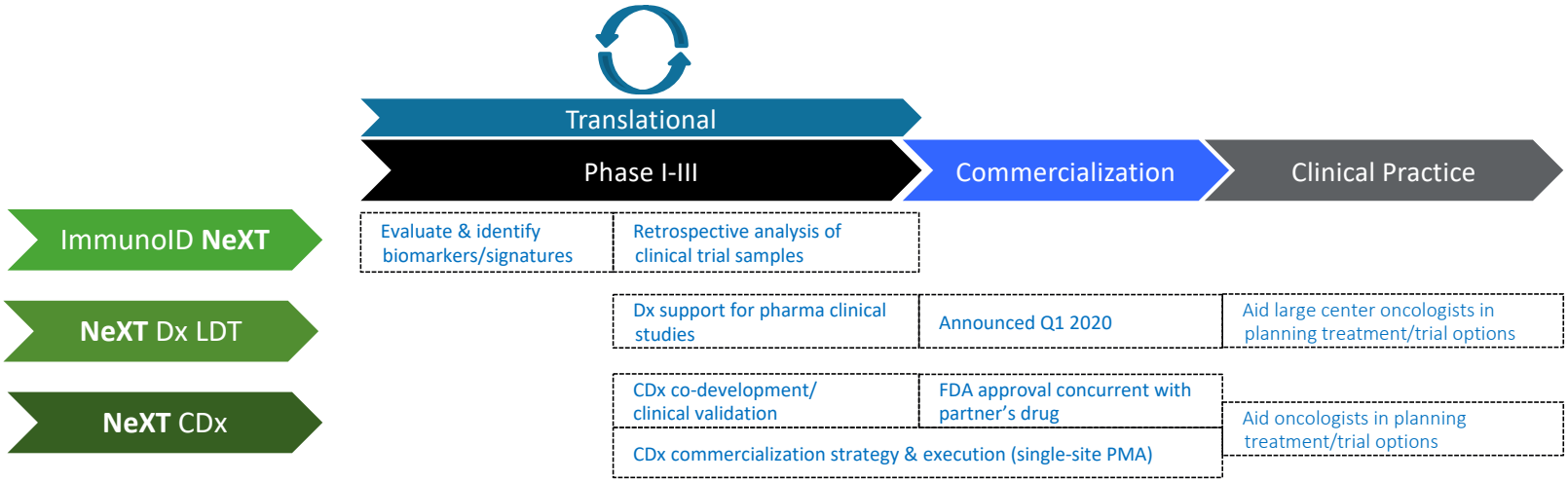


DASH Machine Learning HLA LOH Tool



Figures from Personalis AACR 2020 Posters. Publication Manuscripts in Progress for the Above Findings.

Driving Pharma Diagnostics Opportunities with NeXT Dx and NeXT CDx



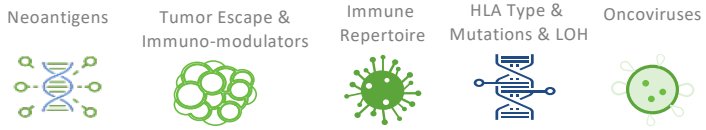
- *Drive tighter relationships with Pharma and lead to additional translational business*
- *NeXT has the scalability to address today's markers and enable future I-O markers on a single platform*

NeXT Dx : Diagnostic for Today, Data for the Future, from One Test

Clinical Diagnostic Reporting

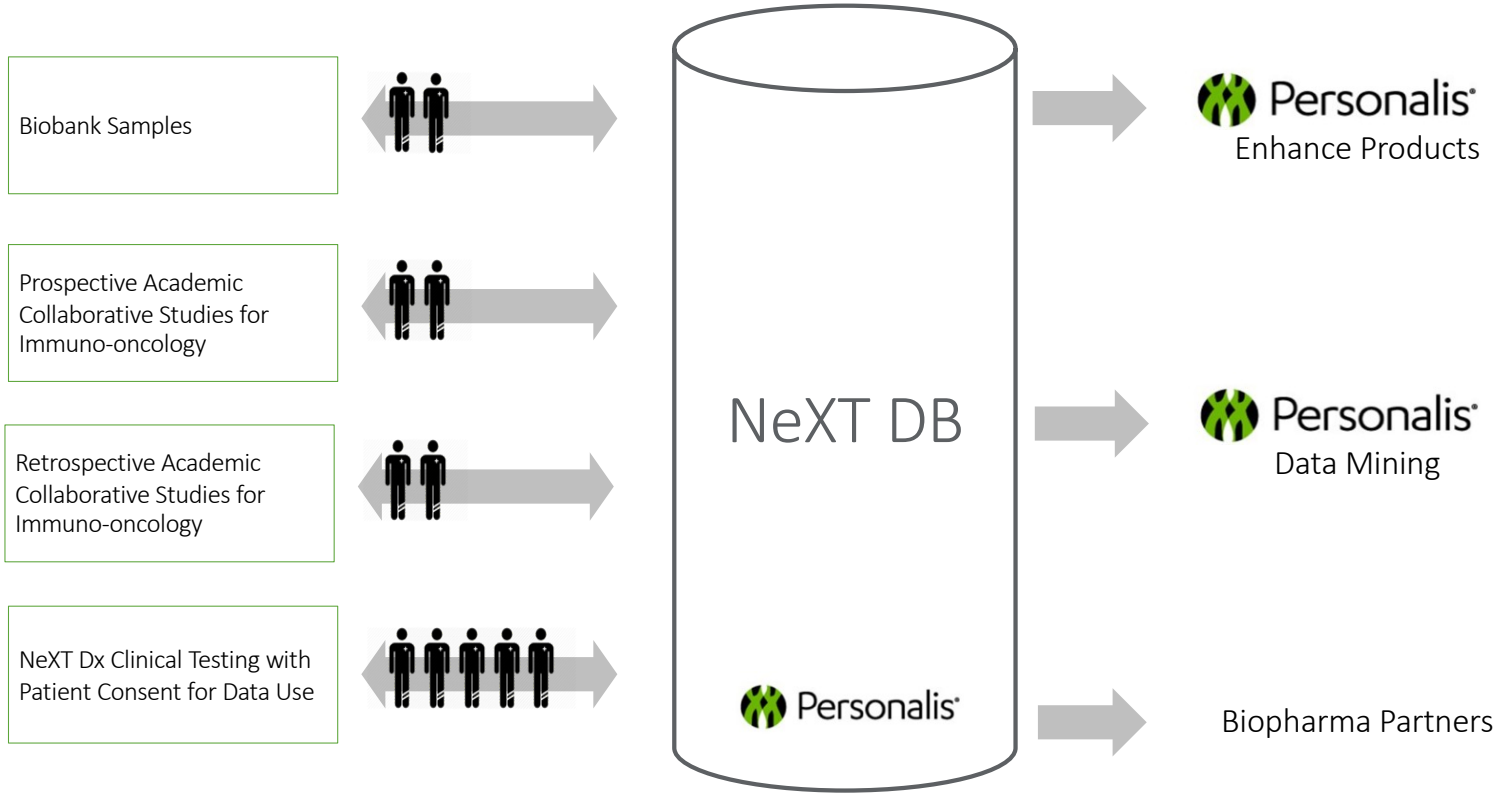
- Comprehensive diagnostic report
  - FDA approved drugs
  - Clinical trials matching
  - Small variants, fusions, CNVs
  - MSI, TMB
- Advanced features
  - Enhanced sensitivity for SNV, Indels
  - Fusions from RNA
  - Matched normal option
  - TMB from Exome

Investigational Biomarkers



- Advanced cancer care
- Translational research
- Clinical studies
- Clinical trials
- Clinico-genomic database

NeXT Dx is a Catalyst for Building NeXT DB Tumor Immuno-genomics Database



Population Sequencing

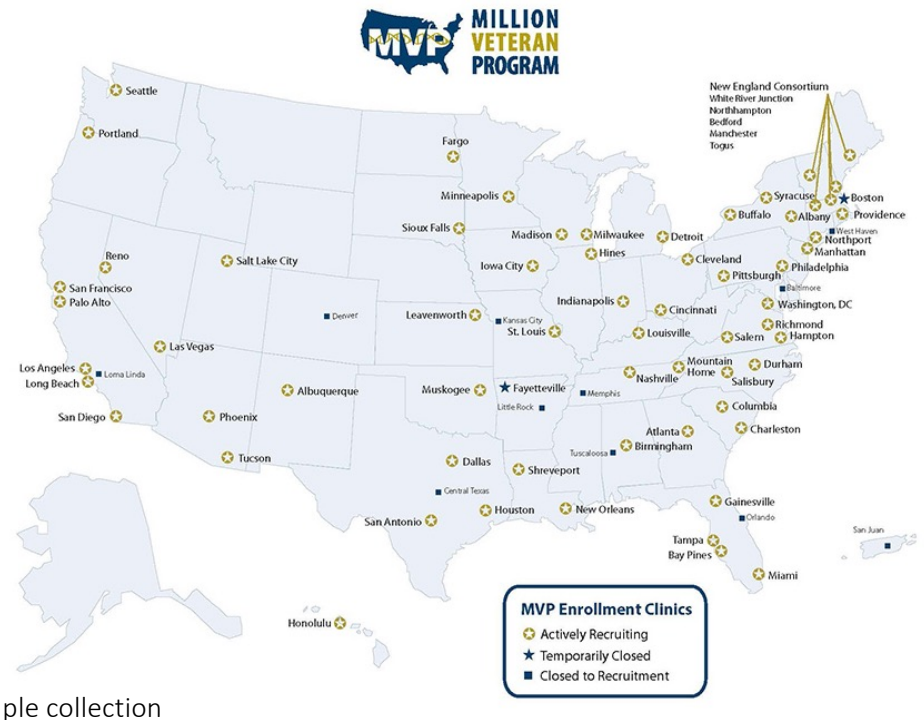
Personalis®

Population Sequencing – U.S. VA Million Veteran Program

Research program to help improve the lives of Veterans and is in a very early stage

National research program to learn how genes, lifestyle, and military exposures affect health and illness.

- Enrolling veterans nationwide at a rate of approximately 100,000 a year
- ~825,000 veterans enrolled in program to-date
- Overall enrollment goal has recently been increased to 2 million veterans[1]



* As of July 2021, the VA MVP has resumed enrollment of Veterans and sample collection

Note:
1. Based upon information from FedHealthIT.com article dated May 5, 2020

Personalis is the Whole Genome Sequencing Provider to U.S. VA Million Veteran Program

Long-term partner
Working together since 2012 with approximately $176M of orders as of September 2020

Significant customer offering stability and scale
2020 Revenue of $56.1M
2Q'21 Revenue of $13.5M

Personalis is currently contracted
to deliver ~147,000 samples;
has completed 125,000+ to date

MILLION VETERAN PROGRAM

DISCOVERY ★ INNOVATION ★ ADVANCEMENT

We have leveraged this experience sequencing germline whole genomes to introduce (2019) whole genome sequencing for cancer. We plan to leverage this further as a future option to detect ~20x more variants for NeXT Personal.

VA MVP Research – An Example of How Data is Used

VA research during the COVID-19 pandemic

In response to the COVID-19 pandemic, VA Research has undertaken a wide array of activities to support and advance VA's clinical and research missions and help Veterans affected by the disease. These efforts have focused on establishing and taking part in **clinical trials** and **data analysis projects** aimed at understanding and treating the disease. VA Research has coordinated closely with internal VA and external partners—such as other federal agencies, and pharmaceutical companies—to identify the areas in which VA's nationwide research capacity, resources, and infrastructure could make the greatest contribution

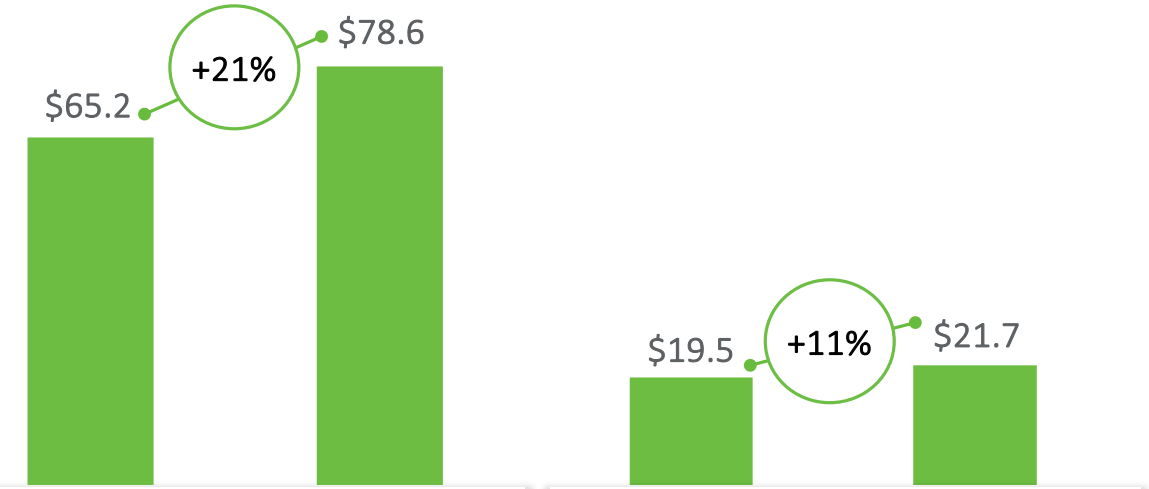
COVID-19 Data Analysis Project

- VA MVP has a racially and ethnically diverse participant population (~20% African American and 7% Hispanic); will analyze the influence of race and ethnicity on disease susceptibility, severity, and outcomes will be an integral part of the analyses.
- Examine the genetic basis of infection by SARS CoV-2;
- Complications of infection;
- Disease severity and outcomes;
- Identify disease mechanisms and new treatment targets for COVID-19

Financials

Personalis®

Strong Financial Profile and Historical Growth



Revenue ($M)	2019	2020	2Q'20	2Q'21
Gross Profit	22.1	20.1	4.7	8.2
Operating Expenses	(44.5)	62.3	(14.2)	(23.1)
Net Loss	(25.1)	(41.3)	(9.3)	(15.0)

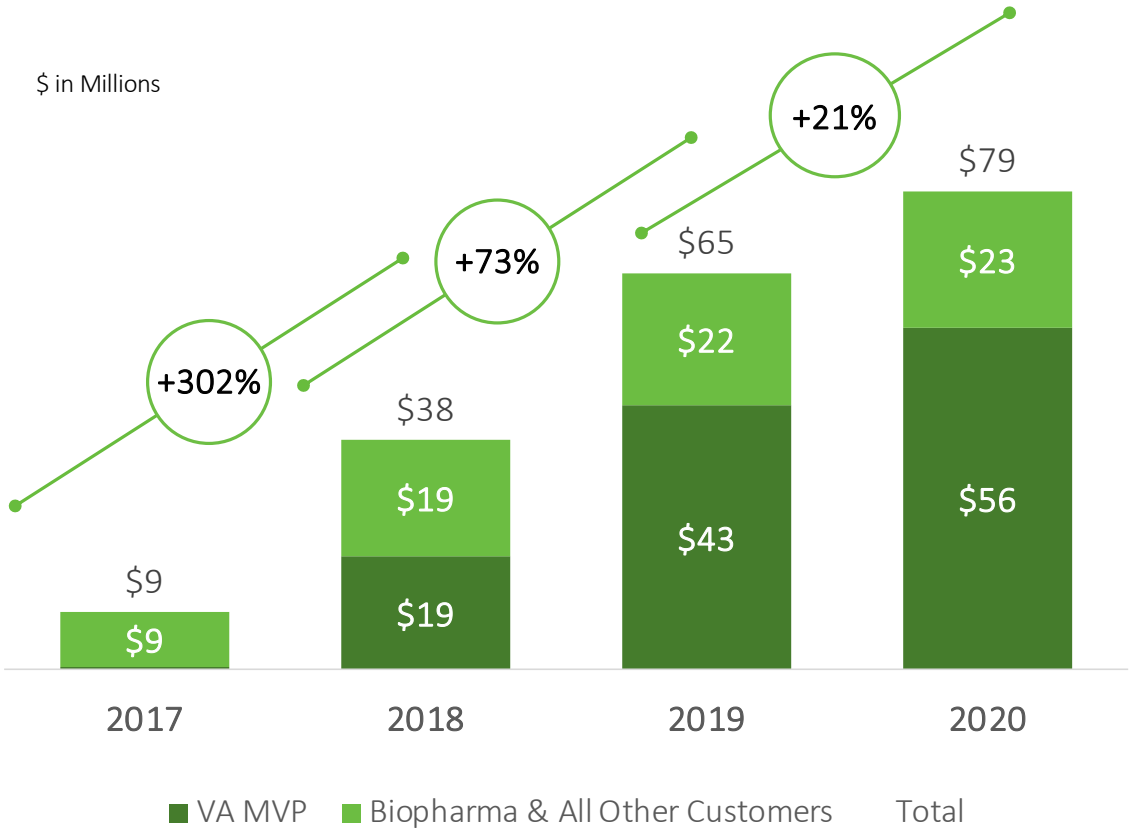
2Q'21 Balance Sheet

Total Cash[1]: $329M

No Debt

Notes:
1. Includes cash, cash equivalents and short-term investments

Personalis Revenue Growth



Q2 2021 Overview

Biopharma & All Other Customers

Q2 2021: $8.2M, +72% Y/Y

Strong customer orders Q3 '19 – Q2 '21 following introduction of our NeXT platform

Population Sequencing (includes VA MVP)

Q2 2021: $ 13.5M

Samples already received for processing through beginning of Q4 2021