One Test:
Miss Less. Discover More.

GeneDx (Nasdaq: WGS)

September 2023

Disclaimer

This presentation contains forward-looking statements under the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements are statements that do not relate to historical facts and events and such statements and opinions pertaining to the future that, for example, contain wording such as “may,” “might,” “will,” “could,” “would,” “should,” “expect,” “intend,” “plan,” “objective,” “anticipate,” “believe,” “estimate,” “predict,” “potential,” “continue,” “ongoing,” or the negative of these terms, or other comparable terminology intended to identify statements about the future. Forward-looking statements contained in this presentation include, but are not limited to, statements about: our future performance and our market opportunity, including our preliminary, unaudited pro forma revenue, pro forma test result volumes and pro forma adjusted gross margins for 2022, our expected full year 2023 reported revenue guidance, our expectations regarding our gross margin profile in 2023 and beyond, our use of cash for continuing operations and our cash burn in 2023 and our turning profitable in 2025, our expectations for our growth and future investment in our business, our expectations regarding our plans to pursue a new strategic direction and exit our reproductive health and somatic tumor testing businesses, including statements regarding our future performance and our market opportunity, including our preliminary, unaudited pro forma revenue, pro forma test result volumes and pro forma adjusted gross margins for 2022, our expected full year 2023 reported revenue guidance, our expectations regarding our gross margin profile in 2023 and beyond, our use of cash for continuing operations and our cash burn in 2023 and our turning profitable in 2025, our expectations for our growth and future investment in our business, our expectations regarding our plans to pursue a new strategic direction and exit our reproductive health and somatic tumor testing businesses,, our addressable market, market growth, future revenue, key performance indicators, expenses, capital requirements and our needs for additional financing, our commercial launch plans, our strategic plans for our business and products, market acceptance of our products, our competitive position and developments and projections relating to our competitors, domestic and foreign regulatory approvals, third-party manufacturers and suppliers, our intellectual property, the potential effects of government regulation and local, regional and national and international economic conditions and events affecting our business. We cannot assure that the forward-looking statements in this presentation will prove to be accurate. Furthermore, if our forward-looking statements prove to be inaccurate, the inaccuracy may be material. These statements involve known and unknown risks, uncertainties and other important factors that may cause our actual results, levels of activity, performance or achievements to be materially different from the information expressed or implied by these forward-looking statements.

The forward-looking statements and opinions contained in this presentation are based on our management’s beliefs and assumptions and are based upon information currently available to our management as of the date of this presentation and, while we believe such information forms a reasonable basis for such statements, such information may be limited or incomplete, and our statements should not be read to indicate that we have conducted an exhaustive inquiry into, or review of, all potentially available relevant information. Many factors could cause actual future events to differ materially from the forward-looking statements in this presentation, including but not limited to: (i) the completion of the preparation of our 2022 year-end financial statements (including all required disclosures) and our 2022 year-end audit; (ii) the ability to implement business plans, goals and forecasts, and identify and realize additional opportunities, (iii) the risk of downturns and a changing regulatory landscape in the highly competitive healthcare industry, (iv) the size and growth of the market in which we operate, and (v) our ability to pursue our new strategic direction, and exit our reproductive health and somatic tumor testing businesses. The information, opinions and forward-looking statements contained in this announcement speak only as of its date and are subject to change without notice

Use of Non-GAAP Financial Measures

This presentation includes non-GAAP financial measures, including [Adjusted Gross Margin. We define Adjusted Gross Margin as our Adjusted Gross Profit divided by our revenue. Adjusted Gross Profit is a non-GAAP financial measure that we define as revenue less cost of services, excluding stock-based compensation expense and restructuring costs. Management believes that these non-GAAP measures of financial results are useful in evaluating the GeneDx's operating performance compared to that of other companies in its industry, as this metric generally eliminates the effects of certain items that may vary from company to company for reasons unrelated to overall operating performance.

This presentation contains estimates, projections and other information concerning our industry, our business, and the markets for our products and services. Information that is based on estimates, forecasts, projections, market research or similar methodologies is inherently subject to uncertainties, and actual events or circumstances may differ materially from events and circumstances that are assumed in this information. Unless otherwise expressly stated, we obtained this industry, business, market and other data from our own internal estimates and research as well as from reports, research surveys, studies and similar data prepared by market research firms and other third parties, industry, medical and general publications, government data and similar sources. While we believe our internal company research as to such matters is reliable and the market definitions are appropriate, neither such research nor these definitions have been verified by any independent source.

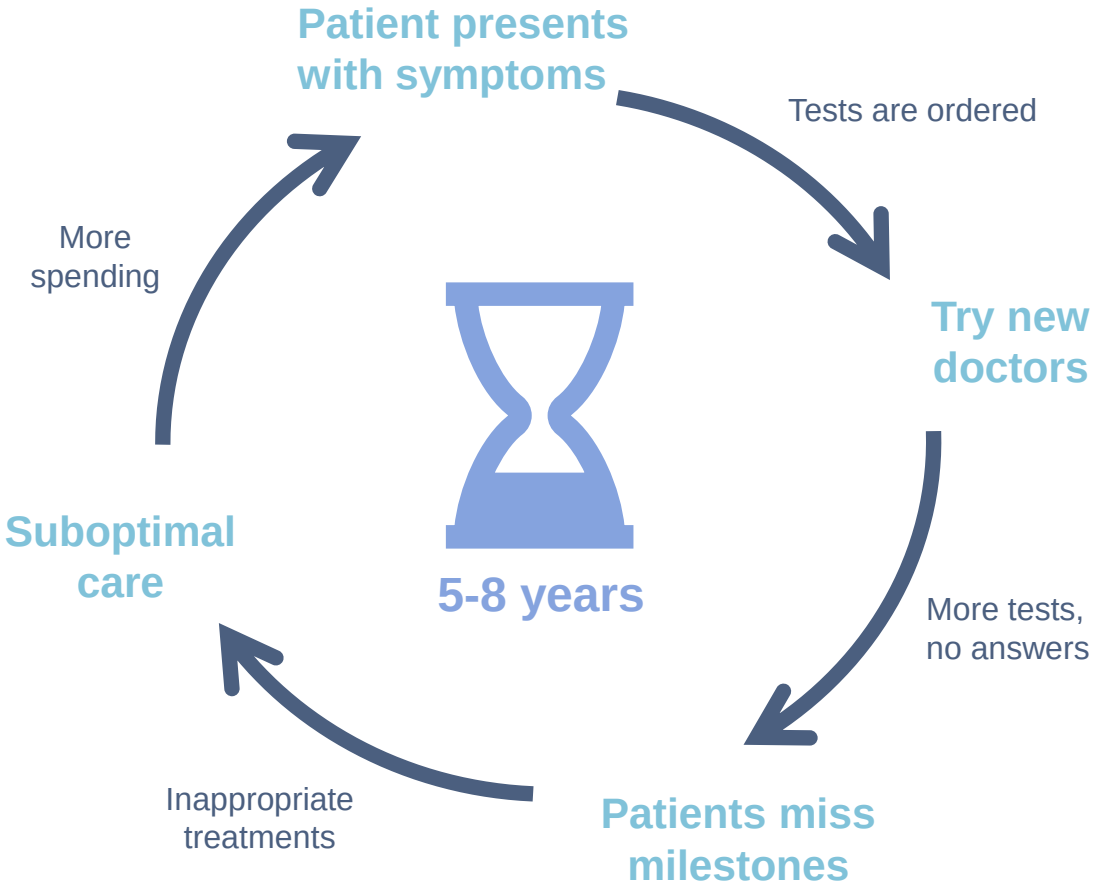
We discuss these and other risks and uncertainties in greater detail in the sections entitled “Risk Factors” and "Management's Discussion and Analysis of Financial Condition and Results of Operations" in our periodic reports and other filings we make with the SEC from time to time. Given these uncertainties, you should not place undue reliance on the forward-looking statements. Moreover, we operate in a very competitive and rapidly changing environment. New risks emerge from time to time. Except as required by law, we undertake no obligation to update publicly any forward-looking statements for any reason after the date of this presentation to conform these statements to actual results or to changes in our expectations. We file reports, proxy statements, and other information with the SEC. Such reports, proxy statements, and other information concerning us are available www.sec.gov. Requests for copies of such documents should be directed to our Investor Relations department at GeneDx Holdings Corp. 333 Ludlow Street, North Tower, 8th Floor, Stamford, Connecticut, 06902. Our telephone number is 800-298-6470.

Our mission: To deliver personalized and actionable health insights to inform diagnosis, direct treatment, and improve drug discovery

GeneDx

The problem: Diagnostic odyssey leads to suboptimal care

Lack of genomic data and connectivity can cause a cycle of misdiagnosis



Missed diagnoses impact everyone

Patients/Caregivers

- Inappropriate treatments and delayed care
- Suffering

Healthcare system

- Increased costs and burden
- Missed opportunities to develop treatments

Providers

- Stress from continued patient suffering
- Inconclusive diagnoses

Rare disease is a misnomer: collectively, common

A constellation of a multitude of disorders

Oncology

>100 types of disease

1 in 8 people will be diagnosed with breast cancer during their lifetime

1,300+ therapies

in clinical testing for cancer

Rare Diseases

>7000 individual diseases

1 in 10 people affected in the US

700 medicines

in development with regulatory pathway via Orphan Drug Act

Our Solution:

Genomic Data + Clinical Insights = Better Health

GeneDx

GeneDx: Leaders in genomic interpretation and health insights

Best-in-class genomic expertise

20+ years of genomic analysis and pioneering work in identification of new disease-causing genes

- **Higher diagnostic yields** compared to multi-gene panels, leveraging internal database and interpretation expertise
- **Fewer uncertain findings** in disease diagnosis
- **More than 500,000 clinical exomes and genomes sequenced**, driving an unparalleled genomic database enriched for rare disease

Centrellis®
health intelligence platform

Proprietary intelligence platform built to ingest and synthesize clinical and genomic data

- **Integrates digital tools with artificial intelligence** to deliver better health insights
- **Ability to combine data** from an electronic medical record and integrate it with genomic data
- **Delivers context** and a more complete understanding of complex disease

Our platform provides actionable responses to diseases throughout the course of a patient's life

Genomics-based healthcare: the future of medicine

Supported by scientific evidence, literature, clinical practice, and industry guidelines

GeneDx is starting with a focus on rare disease and pediatrics and then expanding into larger markets

Rare Disease & Pediatrics: $3B

Rapidly growing patient opportunity and substantial cost savings via early screening

Newborn Screening: $10B

Currently participating in studies to evaluate exome and genome sequencing at birth

Adults: $16B

Expanding into cardio and neuro to replace multi-gene panel and individual gene tests

Conservatively, our total addressable market is ~**$30 billion**.*

**Company Estimates supported by* DefinitiveHC diagnosis data.

Enhanced focus on exome and genome sequencing is working

High volume and revenue growth, expanding gross margins, and reduced cash burn

2022 Financial Results* | Excluding revenues and costs from exited business activities, GeneDx has:

$171M
Revenue generated
A 38% increase from 2021

>180,000
Test results volume
A 23% increase from 2021

39%
Adjusted gross margin†

*The pro forma unadjusted and adjusted results from continuing operations for 2022 and the comparable results for 2021 are presented on a pro forma basis assuming Legacy GeneDx and the Company were combined for the entirety of 2021 and 2022 and exclude the revenues and costs from the now discontinued Legacy Sema4 diagnostic testing business, and include the combination of the Legacy GeneDx diagnostic business revenues and costs with the data and information revenues and associated costs derived from the Legacy Sema4 business. Actual total Company results include the results of the Legacy GeneDx business only from the date of the Company's acquisition of Legacy GeneDx on April 29, 2022 and the purchase accounting associated with the acquisition of Legacy GeneDx and also include the financial impacts of exited Legacy Sema4 business activities for the full year.

†Adjusted gross margin is a non-GAAP financial measure. GeneDx has not provided a reconciliation of its preliminary, unaudited Adjusted Gross Margin to the most directly comparable GAAP measure because certain items excluded from GAAP cannot be reasonably calculated or predicted at this time. Accordingly, a reconciliation is not available without unreasonable effort.

Enhanced focus on exome and genome sequencing is working

High volume and revenue growth, expanding gross margins, and reduced cash burn

Q2 2023 Financial Results* | Excluding revenues and costs from exited business activities, GeneDx has:

$45M
Pro forma revenue generated
13% increase from Q2 2022

~55,000
Test results volume
22% increase from Q2 2022

37%
Adjusted gross margin†

*Pro forma results from continuing operations for GeneDx reported today include the combination of Legacy GeneDx and only the data and information business of Legacy Sema4, and assume Legacy GeneDx was owned for the entirety of 2022. Continuing operations exclude revenues and costs from the now discontinued Legacy Sema4 diagnostics testing business.
†Adjusted gross margin is a non-GAAP financial measure. GeneDx has not provided a reconciliation of its preliminary, unaudited Adjusted Gross Margin to the most directly comparable GAAP measure because certain items excluded from GAAP cannot be reasonably calculated or predicted at this time. Accordingly, a reconciliation is not available without unreasonable effort.

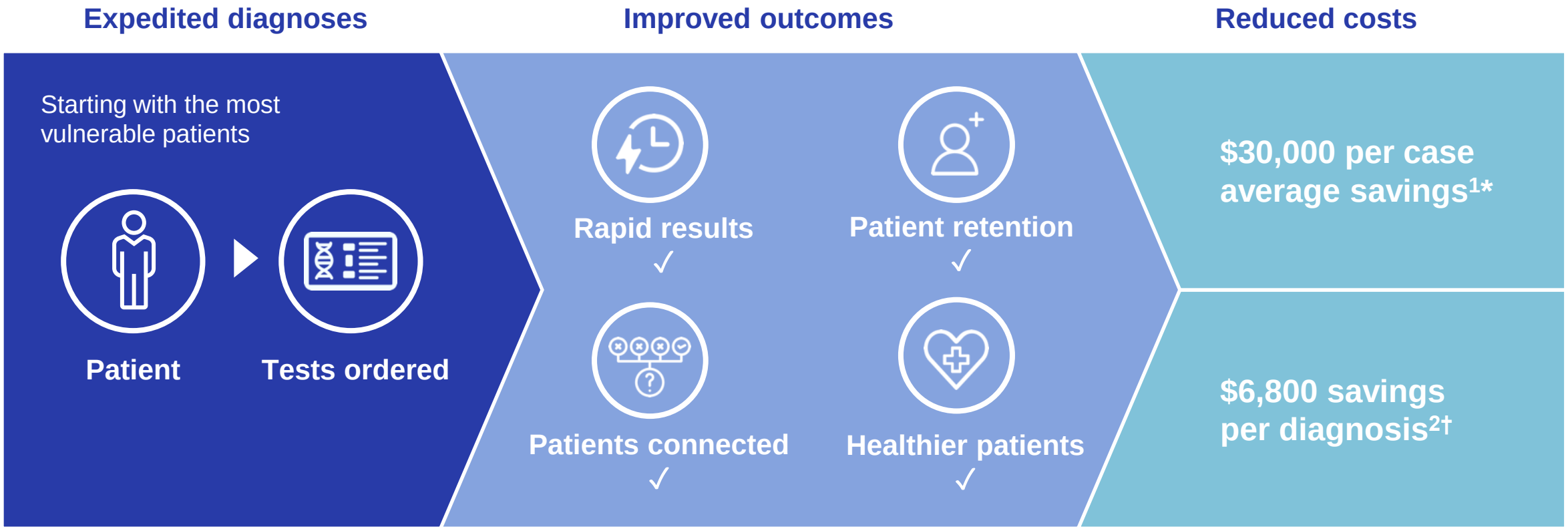
Driving growth and expanding markets

Changing the perception of exome and genome sequencing

GeneDx has spent over a decade solving for limitations of the past

	Then	GeneDx Now
Turnaround time	**“These tests take months to get results”**	**“I can get results in days to weeks”**
Cost	**“These tests are wildly expensive”**	**“Tests are affordable and widely covered”**
Interpretation	**“Results are confusing and filled with useless information”**	**“My patient can get a definitive diagnosis”**

The inherent value of exome sequencing diagnostics



*In the NICU from reduced length of stay, unnecessary care (inpatient).
†When tested at first tertiary presentation for Pediatric Delay Disorder (outpatient).

References: 1. ScienceDaily. (2017, October 19). Rapid whole-genome sequencing of neonatal ICU patients is useful and cost-effective. ScienceDaily. **2.** Tan TY, Dillon OJ, Stark Z, et al. Diagnostic Impact and Cost-effectiveness of Whole-Exome Sequencing for Ambulant Children With Suspected Monogenic Conditions. *JAMA Pediatrics*. 2017;171(9):855. doi:10.1001/jamapediatrics.2017.1755

Medical practice guidelines recommend exome and genome sequencing for patients

ACMG Practice Guideline[1]:

"Strong recommendation based on the available evidence to support the use of ES/GS as either a first- (or second-) line test in patients …. ES/ GS demonstrates clinical utility for the patients and their families with limited evidence for negative outcomes and the ever-increasing emerging evidence of therapeutic benefit."

NSGC Guideline[2]:

"Recommending Exome Sequencing as a First-Tier Genetic Test for Unexplained Epilepsies"

American Epilepsy Society:

"Exome or genome sequencing are favored for most scenarios, as they are more likely to provide a diagnosis."

1. Manickam K, McClain MR, Demmer LA, et al. Exome and genome sequencing for pediatric patients with congenital anomalies or intellectual disability: an evidence-based clinical guideline of the American College of Medical Genetics and Genomics (ACMG). Genet Med. 2021 Nov;23(11):2029-2037. doi: 10.1038/s41436-021-01242-6. Epub 2021 Jul 1.
2. Smith L, Malinowski J, Ceulemans S, et al. Genetic testing and counseling for the unexplained epilepsies: An evidence-based practice guideline of the National Society of Genetic Counselors. J Genet Couns. 2022 Oct 24. doi.org/10.1002/jgc4.1646

An ever-growing number of commercial payers and Medicaid programs are adopting favorable coverage[1]

Commercial coverage
for exome and genome

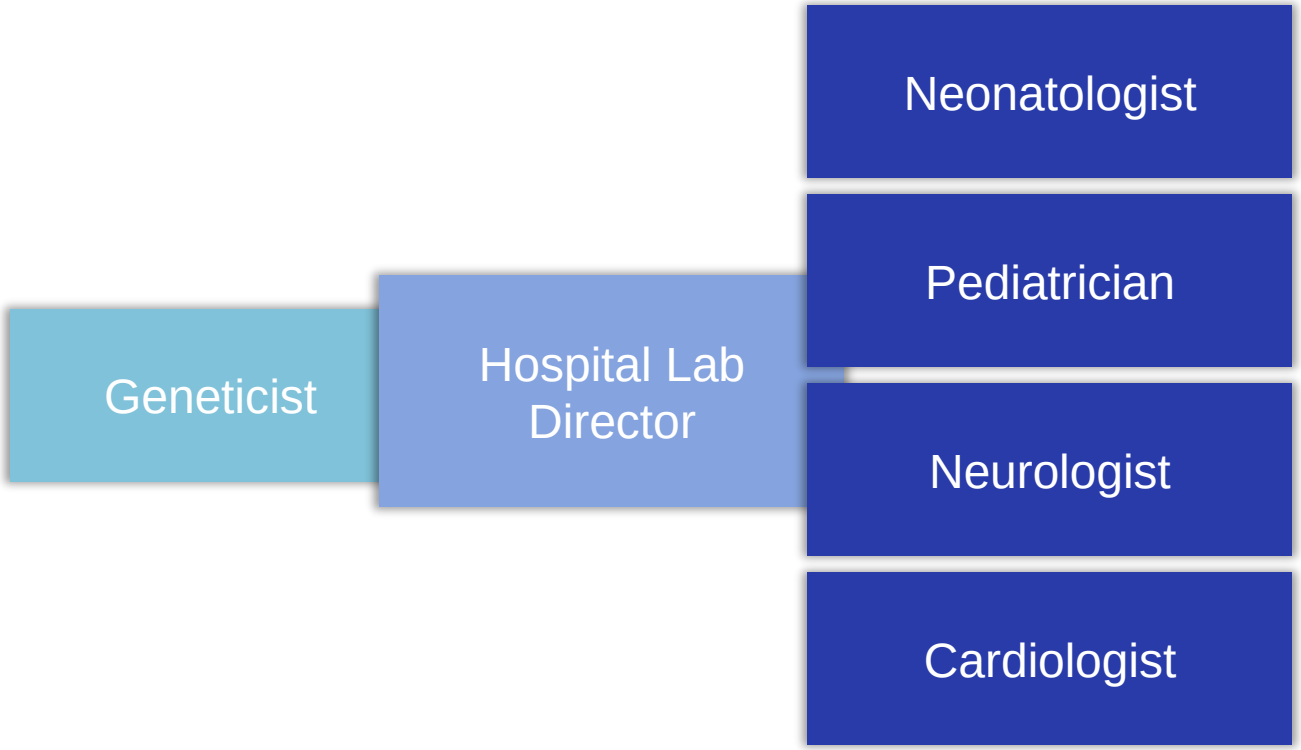
- **70%** offer coverage when criteria are met
- **UnitedHealthcare®** and **Cigna®** cover exome/genome under their commercial plans

Medicaid coverage
of genomic sequencing

- **28 states** cover exome sequencing
- **8 states** cover rapid genome sequencing

Total commercial payer targets represent >93% of commercially insured lives in US. Based on covered life data from DRG database accessed on September 13, 2022.

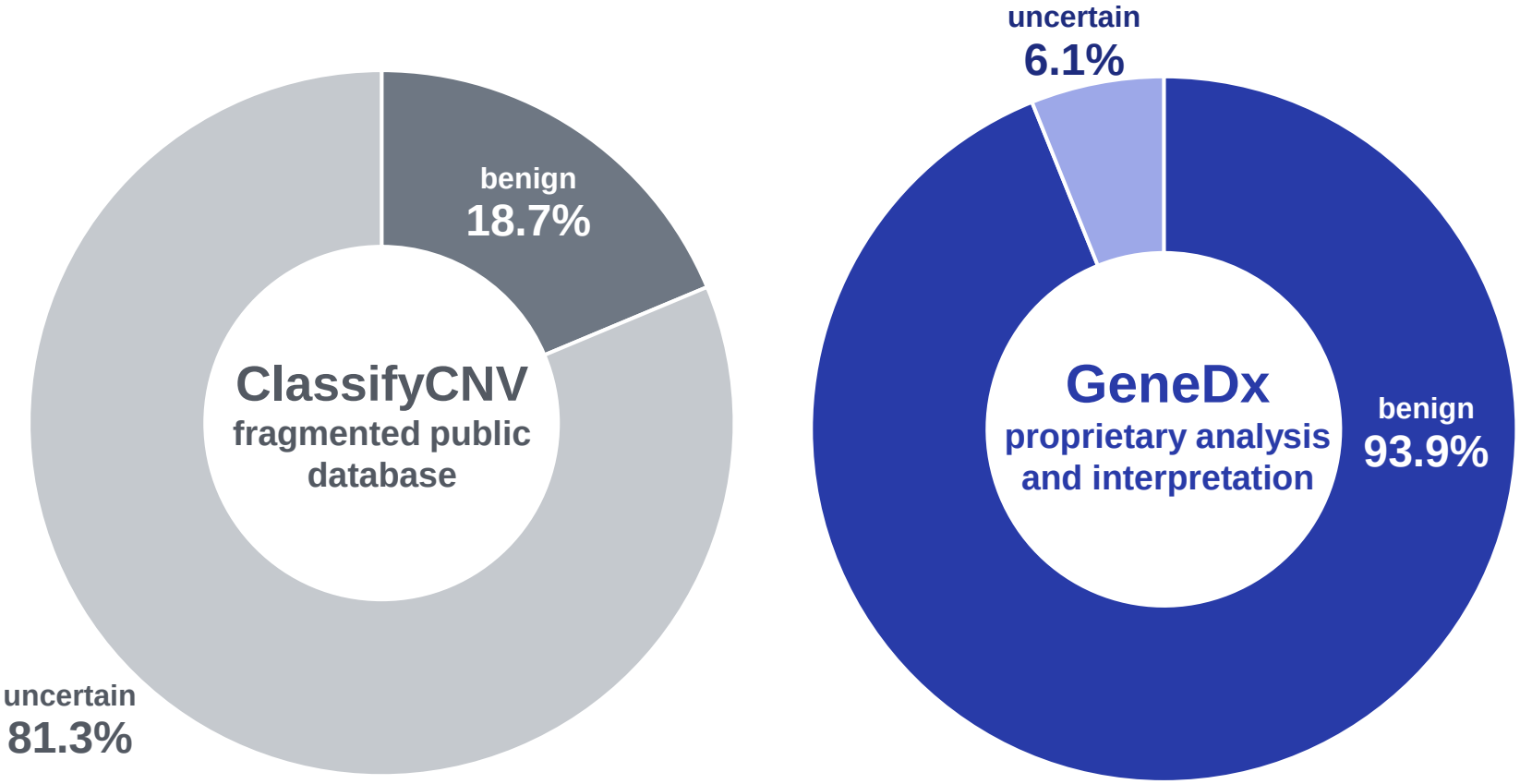
GeneDx leverages decades of earned trust with geneticists to develop relationships with physicians



We currently have relationships with >500 major health systems

*LIMS, final reported test volume and # of new ordering clinicians, date through June .

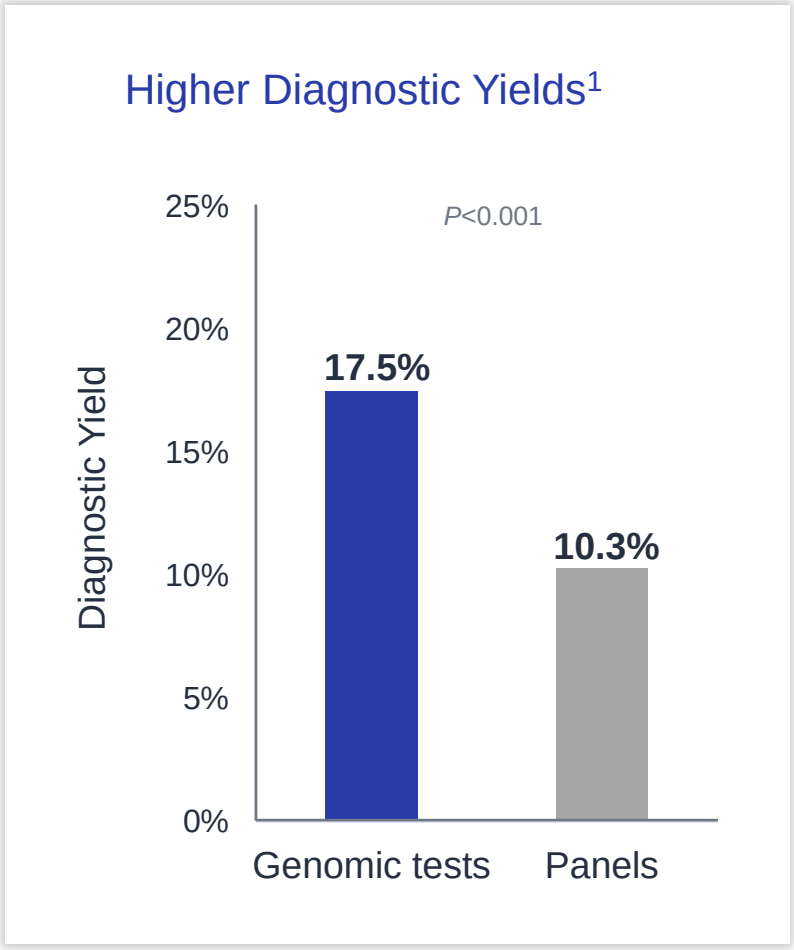
Unparalleled GeneDx interpretation platform powered by 500,000 exomes delivers fewer uncertain findings

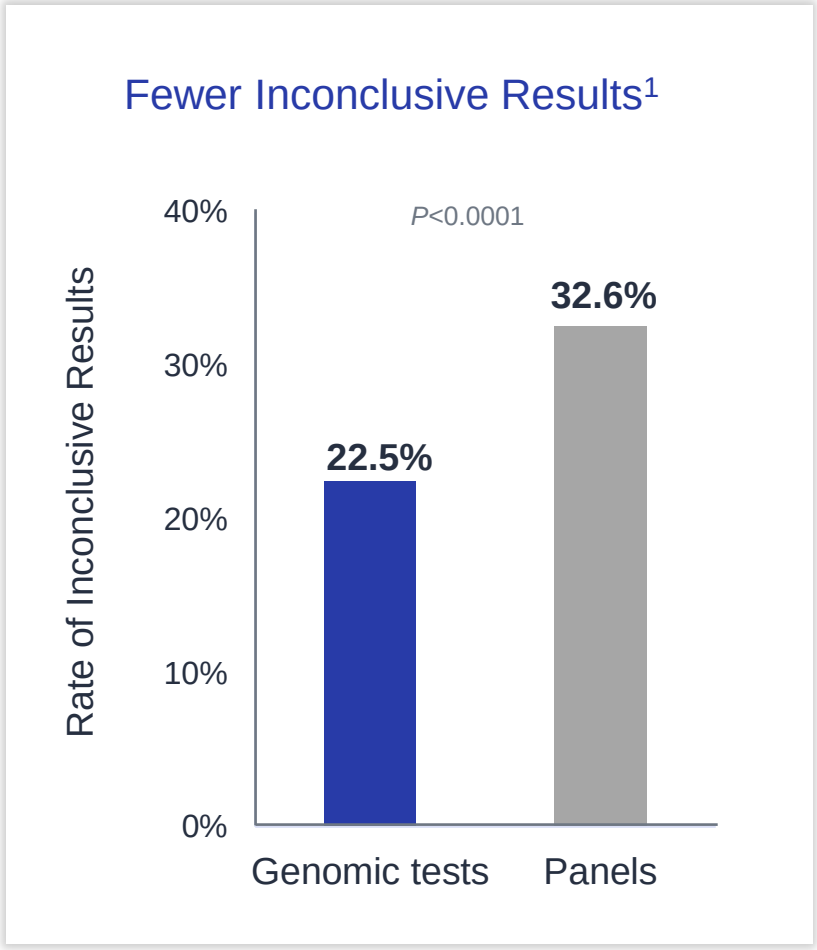


- Fewer uncertain findings lead to improved clarity for clinicians and patients
- More expertly curated disease-causing variants vs public data sets
- Definitive diagnosis in more cases means fewer reviews may be needed

5x fewer complex variants for review with GeneDx

Delivering greater certainty is critical for expanding utilization





- Use of genomic sequencing tests reduced the inconclusive rate and improved diagnostic yield
- Rate of inconclusive results increases with larger multi-gene panel size
- Use of trio sequencing leads to higher diagnostic yield and fewer inconclusive results

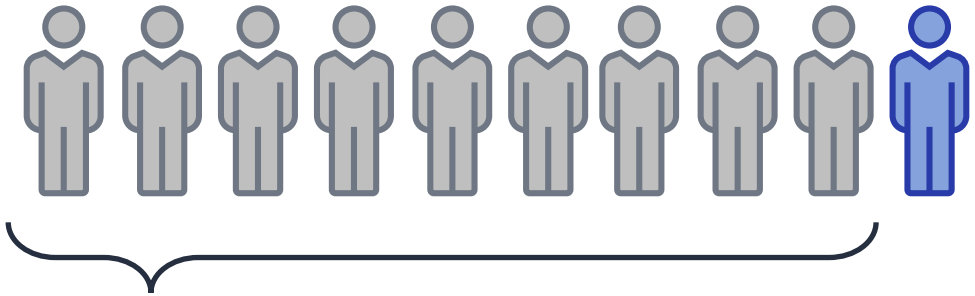
Reference: 1. Rehm HL, Alaimo JT, Aradhya S, et al. *MedRxiv*. 2022. https://doi.org/10.1101/2022.09.21.22279949

Panels leave patients behind. Exome and genome do not.

Exome analysis provides higher diagnostic rates and shorter diagnostic wait times than traditional testing strategies

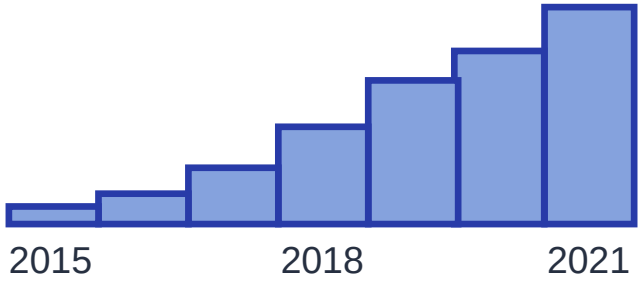
An evaluation of almost 19,000 individuals with autism spectrum disorder revealed:

Shortcomings of prior genetic testing



~90% of the patients had a **previous genetic test with negative results**

Advances in technology are improving diagnoses



+113 genes
linked to autism

From 2015 to 2021, **113 genes** that had no established connection to autism have been **upgraded to "disease-causing"**

The snowball effect of accumulated **GeneDx** data identifies more pathogenic findings that others miss

Reference: Lindy A, Torene R, Retterer K, Kruszka P. Evaluation of 18,911 individuals with autism reveals that exome analysis provides higher diagnostic rates and reduced time to diagnosis than traditional testing strategies. Accepted abstract. American Academy of Neurology Annual Meeting. 2022. Seattle, WA

Exploring innovative methods to enhance diagnostic capabilities and open a new chapter in precision care

Established research collaboration to study the capabilities of HiFi long-read whole genome sequencing to increase diagnostic rates in pediatric patients

PacBio

UNIVERSITY of WASHINGTON

Study is first of its kind to compare diagnostic rates across short- and long-read sequencing platforms

GeneDx

We transform the standard of care to meet the standards of the evolving world

seqfirst

SeqFirst is studying the use of rapid whole genome sequencing to improve care and outcomes of children in the intensive care units at Seattle Children's Hospital.

BROTMAN BATY INSTITUTE

Seattle Children's HOSPITAL · RESEARCH · FOUNDATION

W

GUARDIAN STUDY

The GUARDIAN study is using genome sequencing to screen for more conditions than those currently included in standard newborn screening.

COLUMBIA
COLUMBIA UNIVERSITY IRVING MEDICAL CENTER

illumina

NEW YORK STATE Department of Health

NewYork-Presbyterian

GeneDx

Building the future of healthcare

GeneDx

Building the future of healthcare with our comprehensive tools

Sequence once

Expand the use of and deliver best in class whole exome/genome analysis & interpretation

- **> 500K** clinical exomes
- **> 2.7 million** phenotypes
- **> 1 million** DNA extractions
- **> 400 gene discovery** publications

Combine clinical + genomic data

Match structured clinical and genomic data and supplement with disease models to drive insights

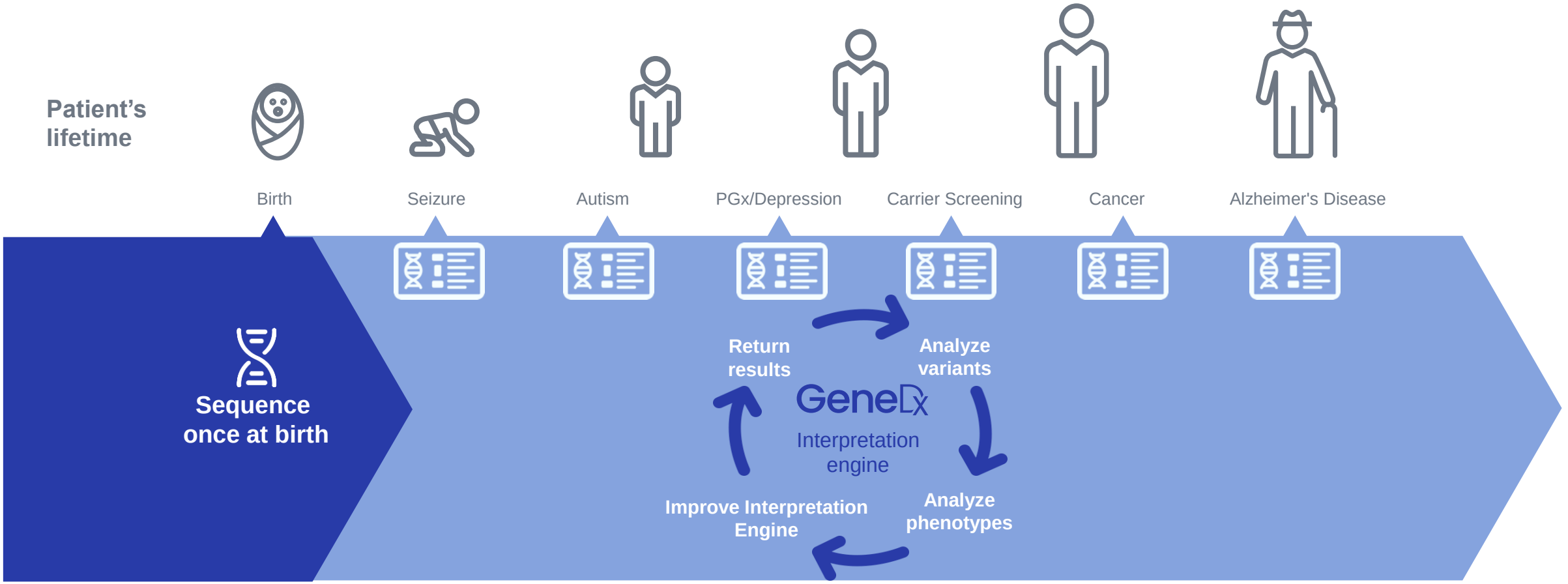
- **3.1 million** patient health records
- **8 million** disease diagnoses
- **47 million** phenotypes
- **20 years** of records abstracted from **56 million** clinical documents

Generation of genomic insights over time

Generate patient-specific and disease profiles to obtain actionable reports upon presentation of symptoms

GeneDx

Sequence at birth; analyze when needed; deliver actionable information across the lifespan

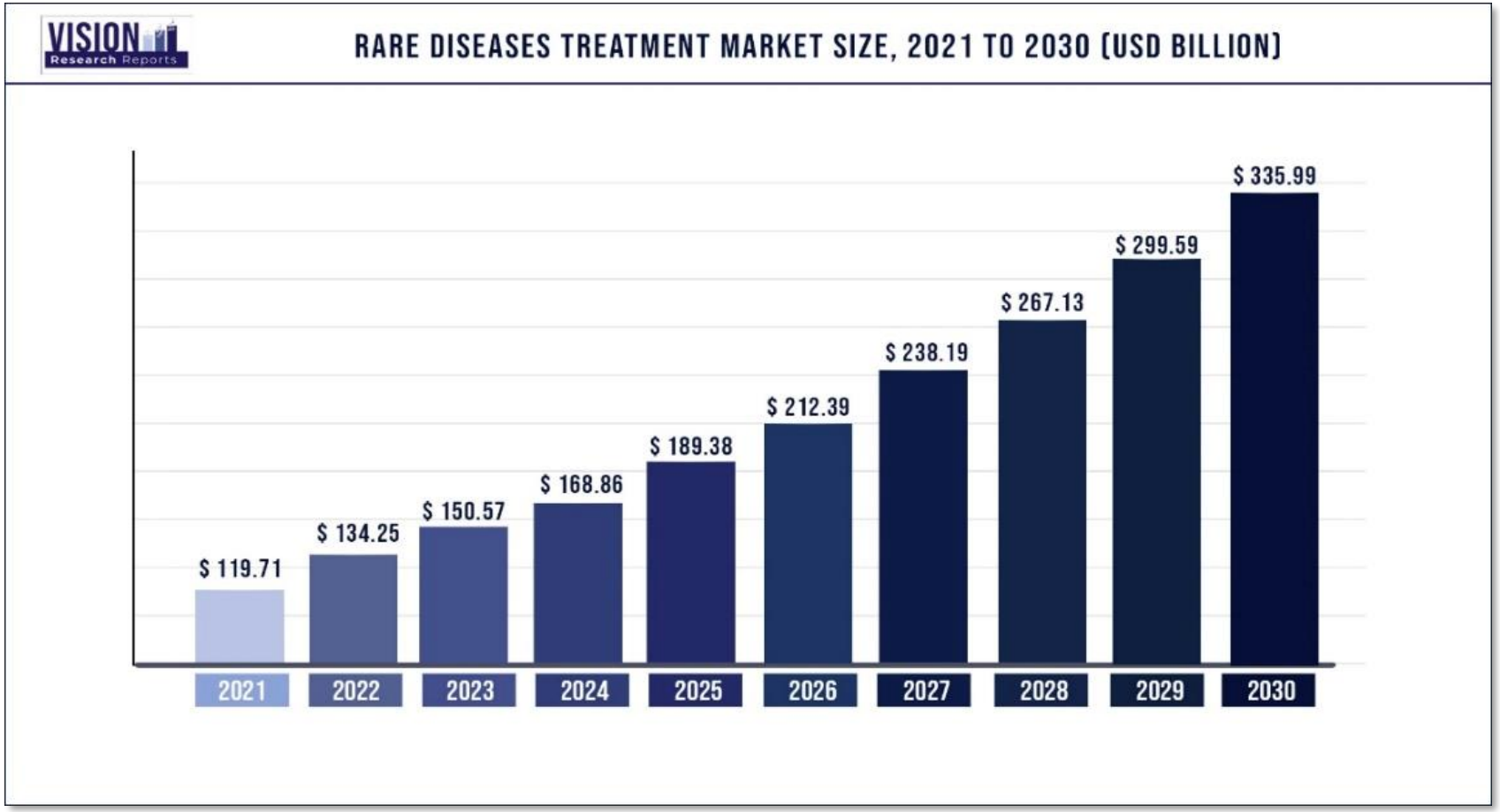


Potential for earlier diagnosis and better outcomes

GeneDx

Untapped partners: Biopharma

In 2020 alone,
more than half (55%)
of novel new drug
and biological approvals
were orphan drugs for
rare diseases.



Data strategy leverages Centrellis as a solutions provider to biopharma partners

Combining clinical and genomic data from patients unlocks upside as platform expands

DRUG DISCOVERY & EXPANSION
Advance genetically prioritized targets to pre-clinical assets

PATIENT IDENTIFICATION & OUTREACH
Identify patients appropriate for clinical trials

REAL WORLD INSIGHTS
Make commercial activities more precise and efficient

FIND **(0-5 year focus)**

Repeatable services model for outreach to patients with **Rare Disease** and their clinicians for clinical trial recruitment or delivery of targeted Rx

UNDERSTAND **(1-5 year focus)**

Reports and analytics leveraging clinicogenomic data in **Rare Disease** within Centrellis to support R&D for targeted therapies

PLATFORM **(Long term)**

SaaS offering: **Therapeutic Area agnostic** access to data, patients, and insights for RWE/RWD to support end-to-end drug discovery pipeline

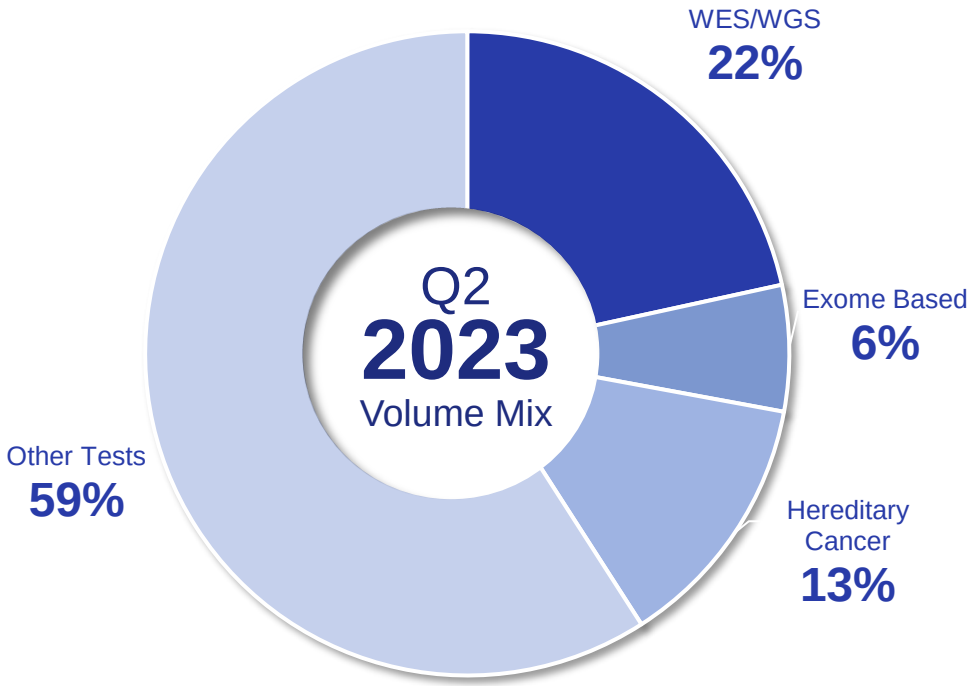
GeneDx

Building an ecosystem of partners

Financial growth from experienced corporate leaders

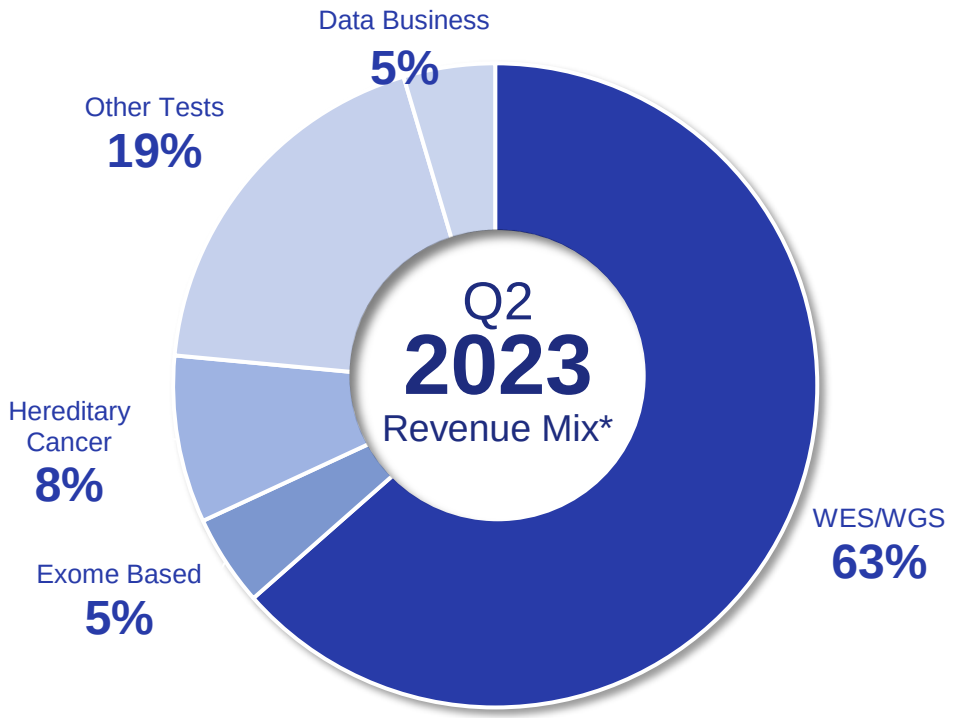
GeneDx

Strong momentum across *pro forma* legacy GeneDx volume & revenue



Q2 | **~55k tests total volume**

11,855 WES/WGS tests (*+56% YoY*)



Q2 | **$45.2M total revenue** *(+13% YoY*)*

37% adj gross margin

WES, whole exome sequencing; WGS, whole genome sequencing.

*The pro forma unadjusted and adjusted results from continuing operations for 2023 including the comparable results for 2022, are presented on a pro forma basis assuming Legacy GeneDx and the Company were combined for the entirety of 2022 and exclude the revenues and costs from the now discontinued Legacy Sema4 diagnostic testing business, and include the combination of the Legacy GeneDx diagnostic business revenues and costs with the data and information revenues and associated costs derived from the Legacy Sema4 business. Actual total Company results include the results of the Legacy GeneDx business only from the date of the Company's acquisition of Legacy GeneDx on April 29, 2022, the purchase accounting associated with the acquisition of Legacy GeneDx, and also include the financial impacts of exited Legacy Sema4 business activities for the full year.

2023 guidance

- Revenues between $205-220 million for full year 2023
- Expanded adjusted gross margin profile 2023 and beyond
- Expects to use $70 to $85 million of net cash for the second half of 2023, inclusive of servicing obligations of the previously exited business activities
- Turn to profitability in 2025

Experienced management team with decades of leadership in genetics, data science, and healthcare

Katherine Stueland
Chief Executive Officer

Jennifer Brendel
Chief Commercial Officer

Matthew Davis
Chief Technology & Product Officer

Kevin Feeley
Chief Financial Officer

Kareem Saad
Chief Transformation Officer

Devin K. Schaffer
General Counsel

Gustavo Stolovitzky
Chief Science Officer

BAYER IBM INVITAE KPMG Pfizer CardinalHealth

GeneDx

One test. There's no one better.

GeneDx

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