

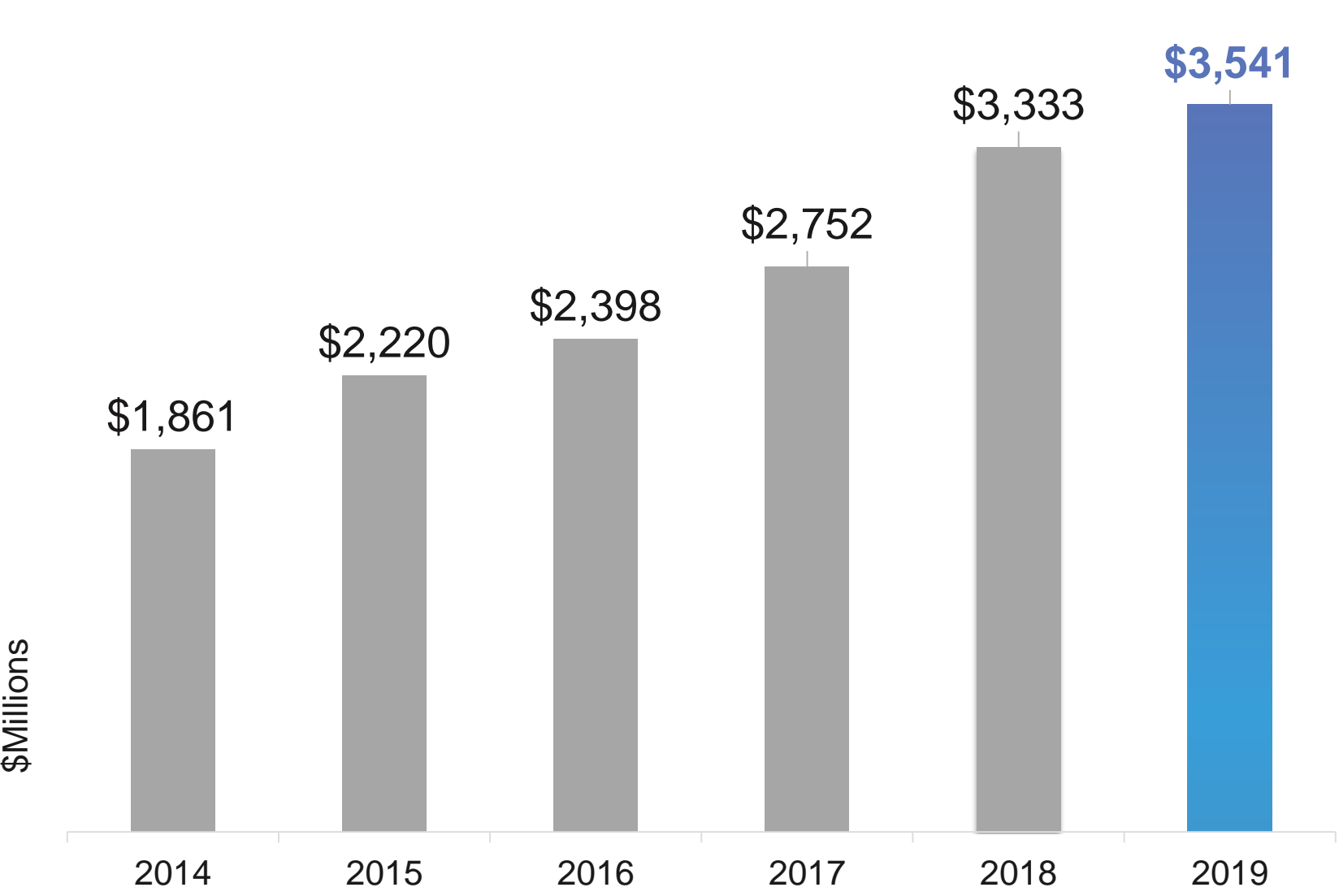
2020 JP Morgan Healthcare Conference

Francis deSouza | President & CEO | January 13, 2020

Safe Harbor Disclosures

This communication may contain statements that are forward-looking. Forward-looking statements are subject to known and unknown risks and uncertainties and are based on potentially inaccurate assumptions that could cause actual results to differ materially from those expected or implied by the forward-looking statements. Among the important factors that could cause actual results to differ materially from those in any forward-looking statements are (i) our ability to further develop and commercialize our instruments and consumables and to deploy new products, services, and applications, and expand the markets, for our technology platforms; (ii) our ability to manufacture robust instrumentation and consumables; (iii) our ability to successfully identify and integrate acquired technologies, products, or businesses; (iv) our expectations and beliefs regarding future conduct and growth of the business and the markets in which we operate; (v) challenges inherent in developing, manufacturing, and launching new products and services; (vi) our expectations regarding obtaining regulatory approval for our products; (vii) our expectations regarding our future financial results; and (viii) the application of generally accepted accounting principles, which are highly complex and involve many subjective assumptions, estimates, and judgments, together with other factors detailed in our filings with the Securities and Exchange Commission, including our most recent filings on Forms 10-K and 10-Q, or in information disclosed in public conference calls, the date and time of which are released beforehand. We undertake no obligation, and do not intend, to update these forward-looking statements, to review or confirm analysts' expectations, or to provide interim reports or updates on the progress of the current quarter.

Preliminary Revenue



2019

~\$3,541M

Revenue

6%

YoY Growth

Q4 2019

~\$950M

Revenue

10%

YoY Growth

2020 Guidance

\$3.86–\$3.93B

FY20 Revenue Guidance

9–11%

Revenue Growth

~30%

Operating Margin

\$6.45–\$6.65

GAAP FY20 EPS

\$6.80–\$7.00

Non-GAAP FY20 EPS

2020 Revenue Growth Expected to be 9% to 11%

At the Midpoint of the Guidance Range, Assumptions Include:

~14%

Total Sequencing
Growth

~17%

Sequencing
Consumables Growth

PopGen

- ~200K whole genomes for UK Biobank
- ~60K whole genomes for NIH's All of Us
 - Mid-2020 start
- ~20K whole genomes for GeL/UK
 - Mid-2020 start

Arrays

- Arrays down ~15%

2019 Sequencing Systems: Most Shipments in Illumina History

>2,400
Total Shipments



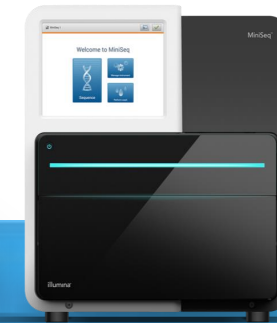
NovaSeq™
~320



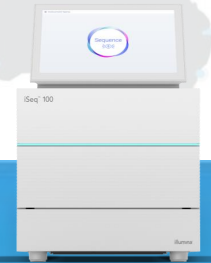
NextSeq™
~620



MiSeq™
~730



MiniSeq™
~240



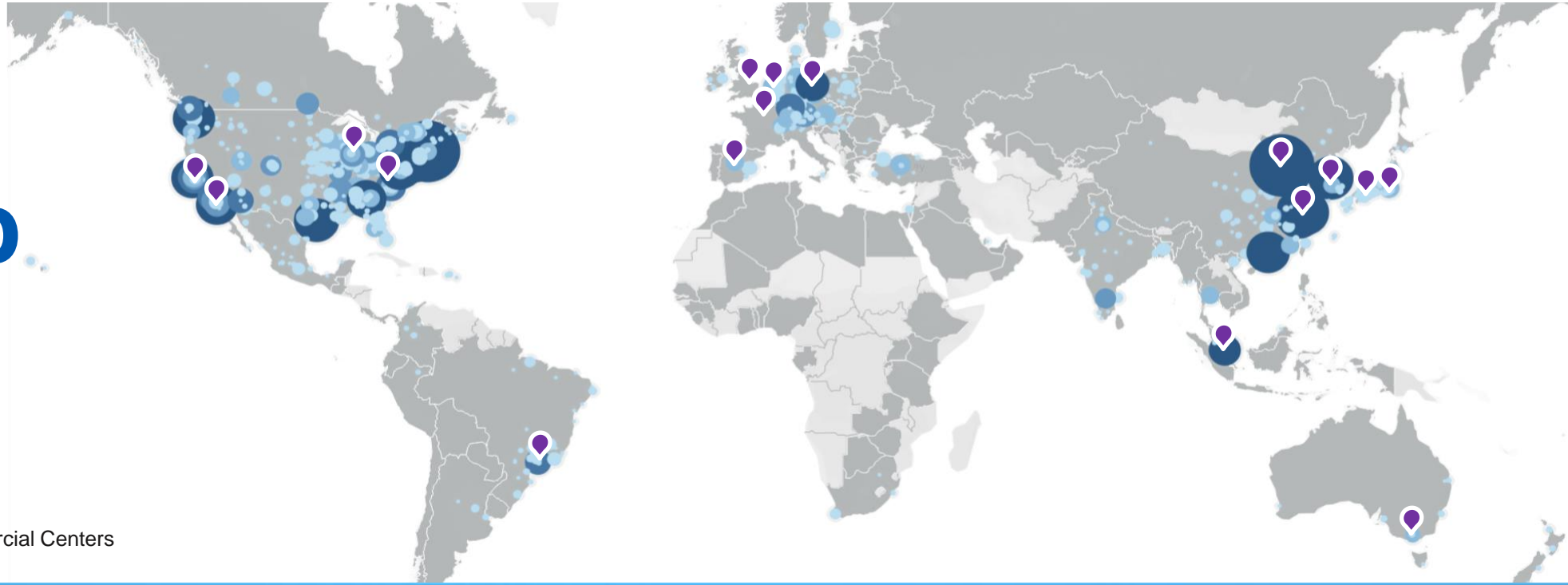
iSeq™
~510

Global Installed Base Grows >10% to >15,000*

~150 Pb

Sequence Data
in 2019

📍 = Illumina Distribution and Commercial Centers



BaseSpace®

High Throughput

~920

NovaSeq™

~1,300

HiSeq™

Mid Throughput

~3,600

NextSeq™

Low Throughput

~7,400

MiSeq™

~1,100

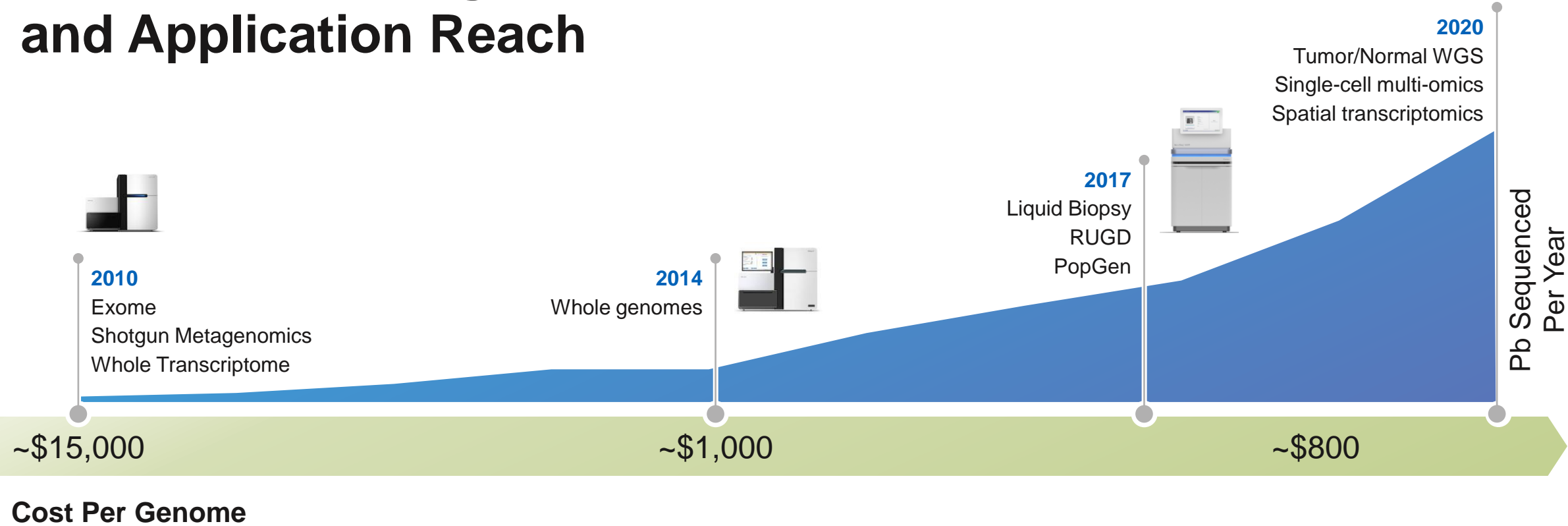
MiniSeq™

~860

iSeq™

*Excluding HiSeq, this includes all systems that have been shipped to customers and may include some decommissioned or inactive systems.

Lower Sequencing Cost Broadens Customer and Application Reach

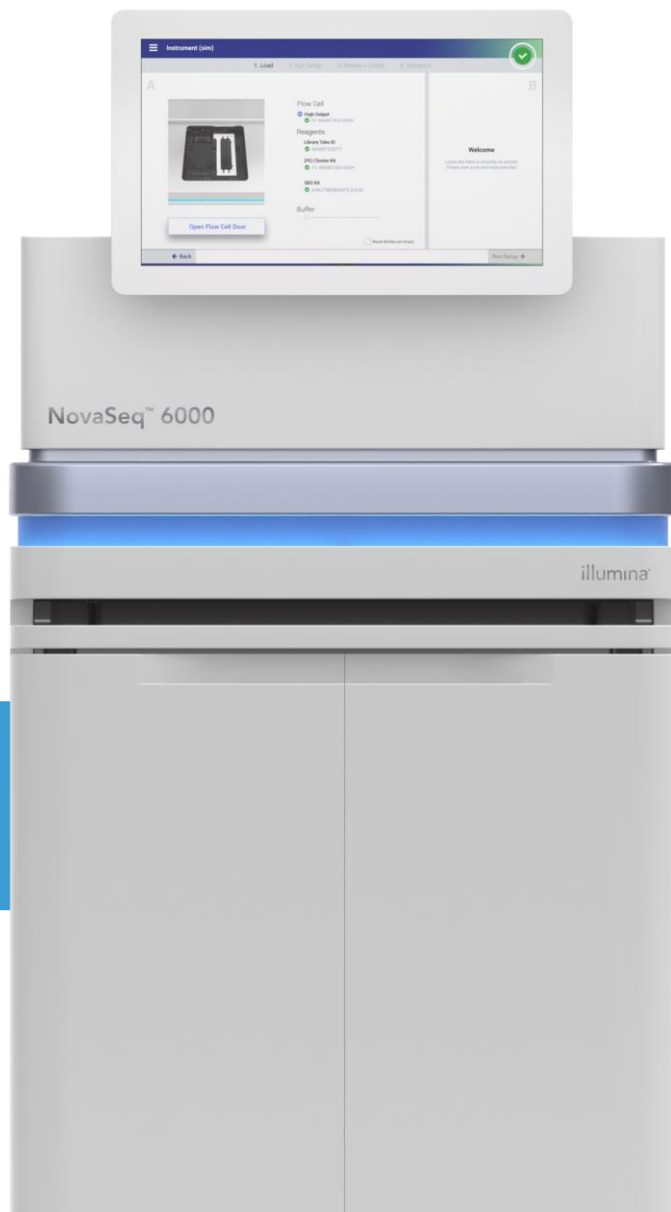


10x
Increase in Customers

>50x
Increase in Data

~20x
Cost Reduction

NovaSeq™ Consumables Almost Double in 2019



2x Data

Generated in 2019

~40%

New to High-Throughput

~30%

HiSeq™ conversions

Every 30 sec

30x genome
equivalent generated

Clinical Drives NextSeq™ Adoption



Record ~620 NextSeq Shipments

~350

New NextSeq
Customers

>100

New NextSeqDx
Customers

>50%

Clinical Shipments
(inc. Consumables)

New to Sequencing Users Drive Low-Throughput System Adoption

~700 New LT System Owners



~5,600

Customers

115

Countries

85%

System Customers
with LT System

2020 Key Focus Areas



Enable
Breakthrough
Genomics Research



Accelerate
Clinical Adoption of
Genomics



Advance
Technology Leadership
and Innovation

Sequencing Opportunities Across Research Expanding

Emerging Applications

Liquid Biopsy
Synthetic Bio

Immunoprofiling
Microbiome

CRISPR
Infectious Diseases

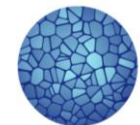
Novel Methods

Single-Cell
Spatial Genomics
Rare Variant Detection

More Samples
More Sequencing
More Discoveries

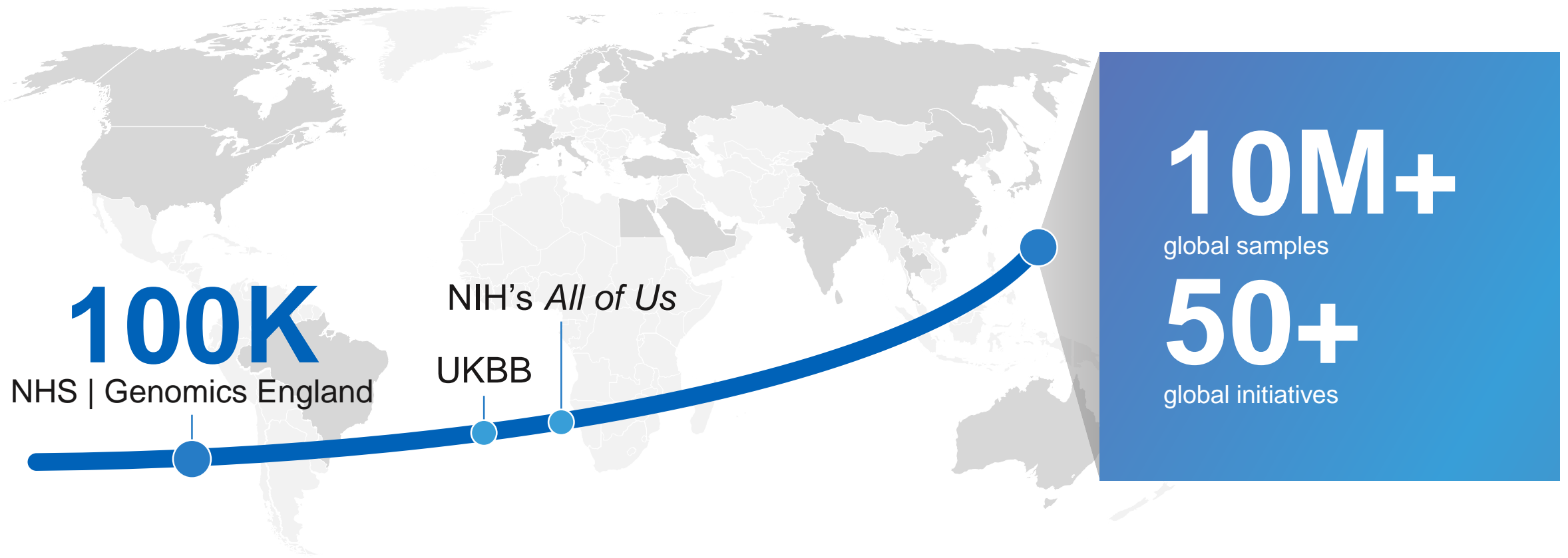
Key Initiatives

UKBB
All of Us
Human Cell Atlas



HUMAN
CELL
ATLAS

Global Population Genomics Research Gaining Momentum



Population-specific
genomic insights



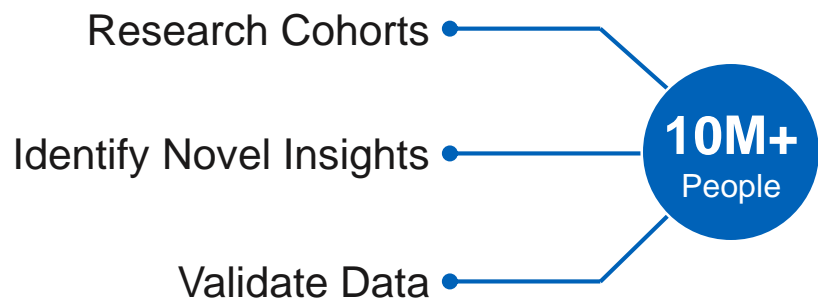
Scales genomic
infrastructure



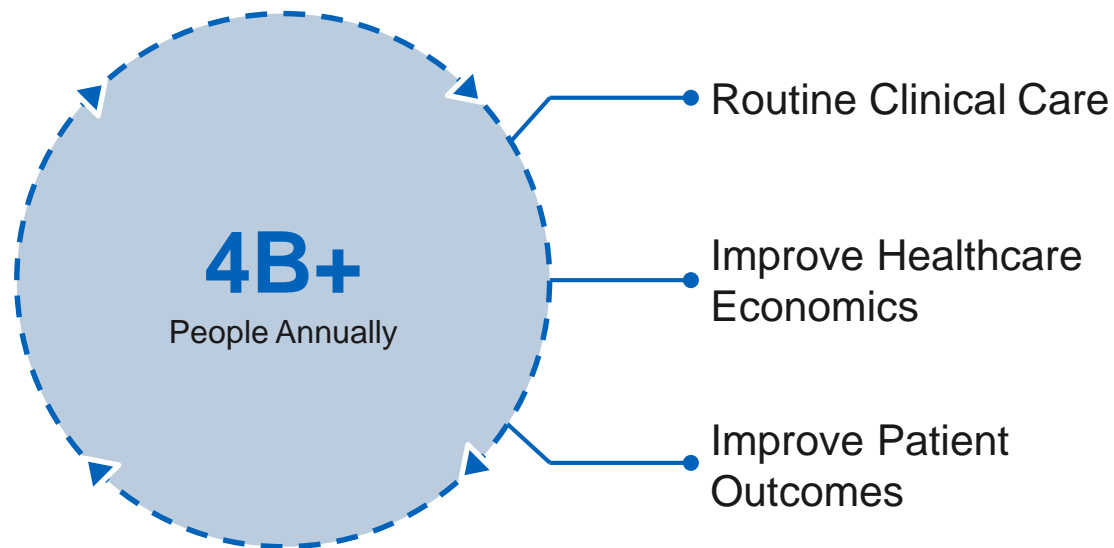
Connects
researchers

Poised to Transition to Broader Health System Programs

Population Research Initiatives



Population Health System



More People

When sequencing becomes standard of care

More Applications

Going beyond RUGD and oncology

More Sequencing

Multiple sequencing over lifetime

UK Leading Adoption of Genomics at Population Health Level

NHS

Initial ramp in

2020

2014

First participants recruited

2015

First participant diagnosis returned

2016

First diagnoses of children returned

2017

First research users access data

2018



100,000

Genomes sequenced

2025

NHS

300,000–500,000

Patients sequenced

Vision

Diagnose rare diseases

Match patients to most effective treatment

Increase the number of cancer survivors

Illumina's Clinical Strategy



Enable Innovators

Provide technology solutions that drive innovation



Broaden Use

Deliver IVDs to broaden use of clinical sequencing

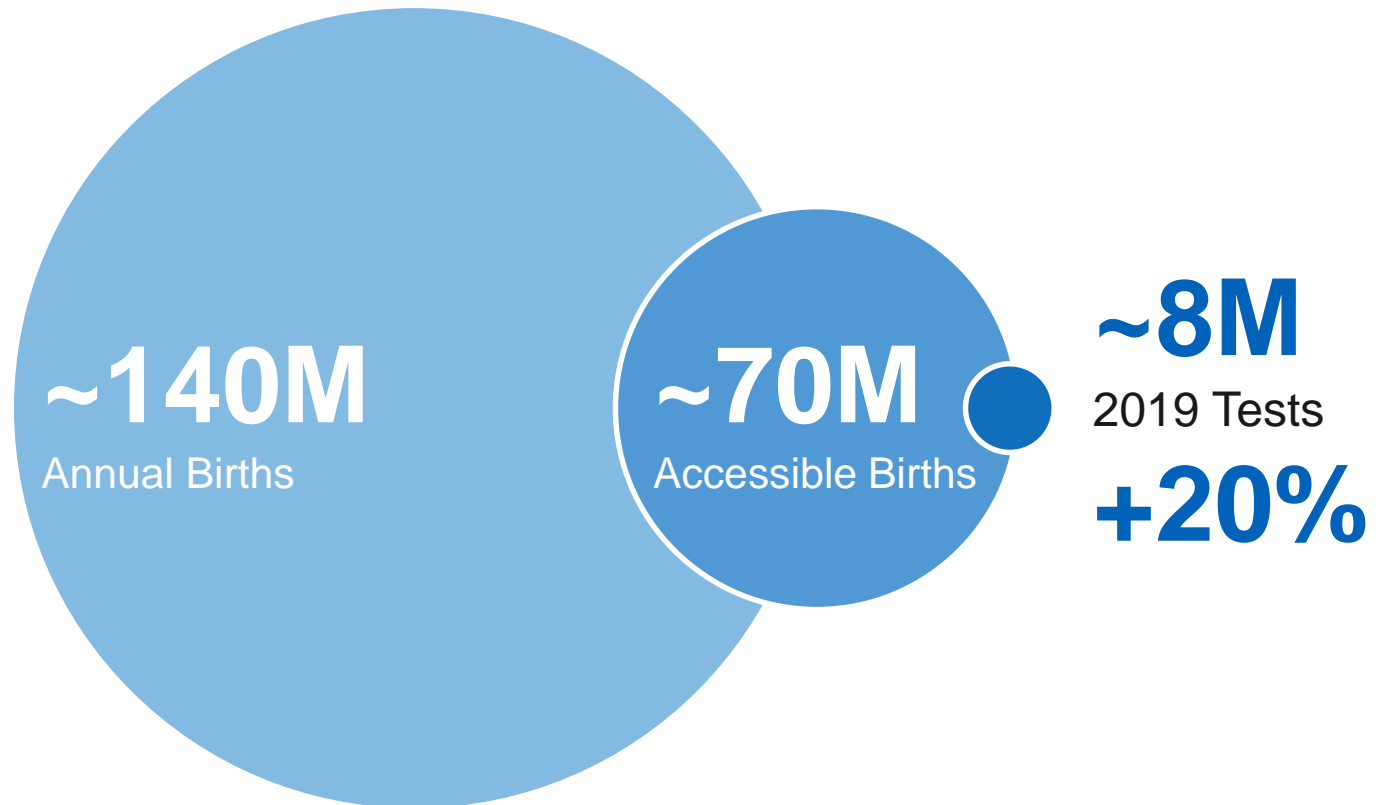


Accelerate Reach

Partner to accelerate patient access and impact



NIPT Adoption Growing with Majority of Opportunity Ahead



Illumina IVD Solutions Accelerate NIPT Adoption

VeriSeq™ NIPT

CE-IVD

80%

2019 Sample Growth

>890K

Samples Processed Since Launch

25

Countries



TruSight™ NIPT in Development
for the US Market

Planned Sample-to-Report Solution
Targeting FDA PMA submission

Improving Patient Outcomes for Genetic Disease

300M Affected
Lives

6000 Genetic
Diseases

200 New Diseases
Reported Annually

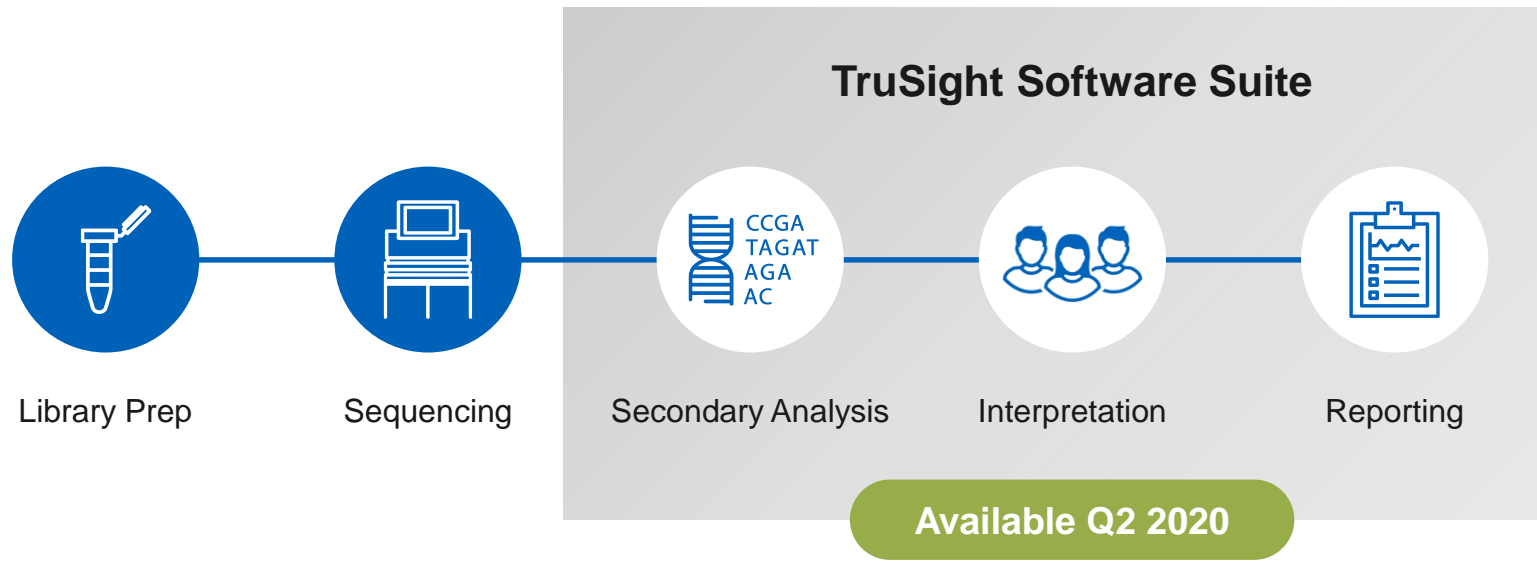
Today's Reality

<1%
Utilization

>5
Years for diagnosis

\$57B
Cost Burden

TruSight™ Software Suite Will Enable Sample-to-Report for Genetic Disease



From millions of variants to an answer

Quickly

Seamlessly

Cost-effectively

Development Collaborator



Select Beta Customers



SickKids®

UC San Diego

Global Opportunity for NGS to Inform Cancer Care

100M
Patient Lives

Early Screening

freedom GRAIL
GUARDANT Thrive.

<1% Current
Adoption

5M
Patient Lives

Therapy Selection

ARCHER[®] FOUNDATION
MEDICINE[®]
GUARDANT illumina[®] sysmex
QIAGEN SOPHiA[™]

~8% Tumors
Sequenced

12M
Patient Lives

Monitoring

Adaptive[®] biotechnologies[®] ARCHER[®]
GUARDANT
LexentBio natera

<1% Current
Adoption

Illumina Cleared Platforms Support Clinical Customers



MiSeq™ Dx

- Oncology
- Genetic Disease

NextSeq™ Dx

- NIPT
- Oncology Panels
- Genetic Disease Exomes

Illumina Cleared Platforms Expanding with NovaSeqDx



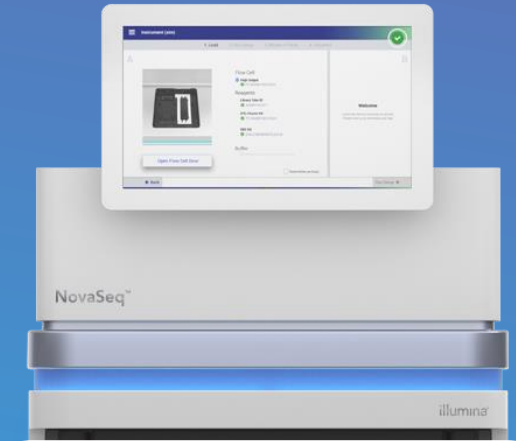
MiSeq™ Dx

- Oncology
- Genetic Disease



NextSeq™ Dx

- NIPT
- Oncology Panels
- Genetic Disease Exomes



Intended for IVD Use
Targeting 2022

NovaSeq™ Dx

- Blood based ctDNA
- Tumor/normal WGS
- Genetic Disease WGS

Partnerships Broadening IVD Menu

Impact more lives.
Faster and better.



Broaden Channel

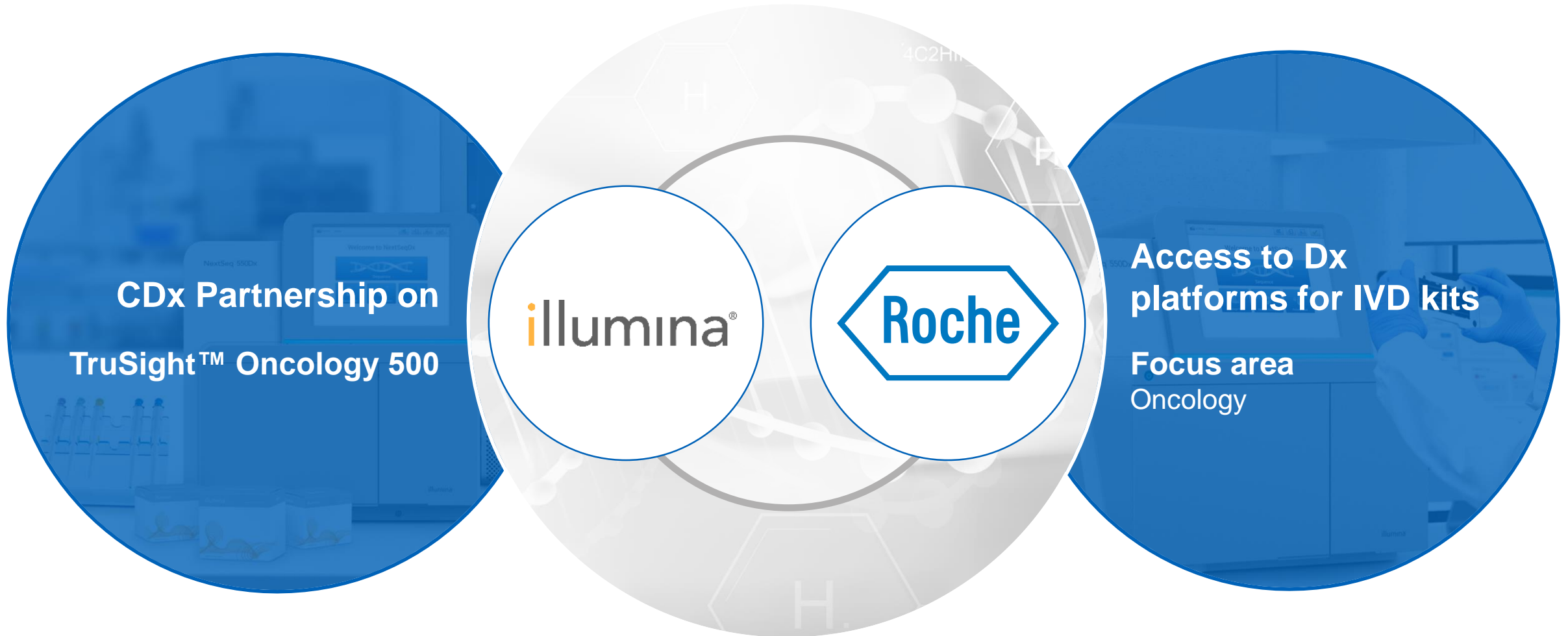
Expand Menu

Drive Reimbursement

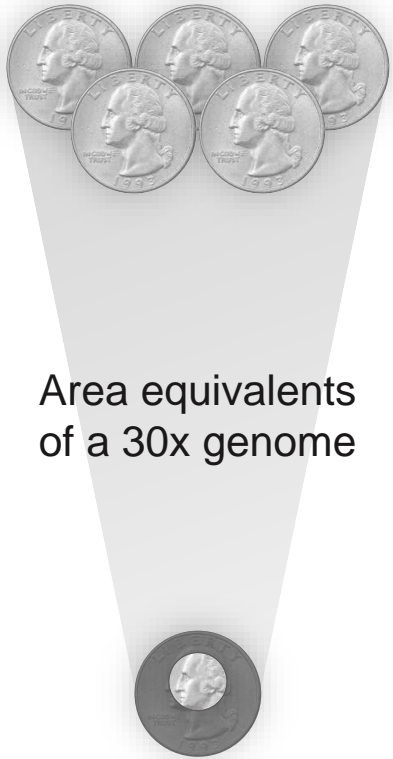
Accelerate Physician
& Patient Education

Illumina + Roche

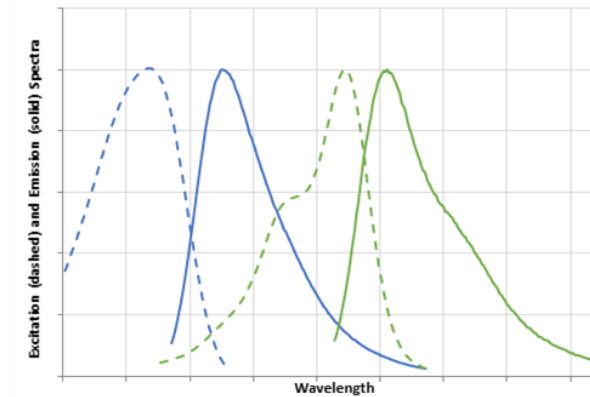
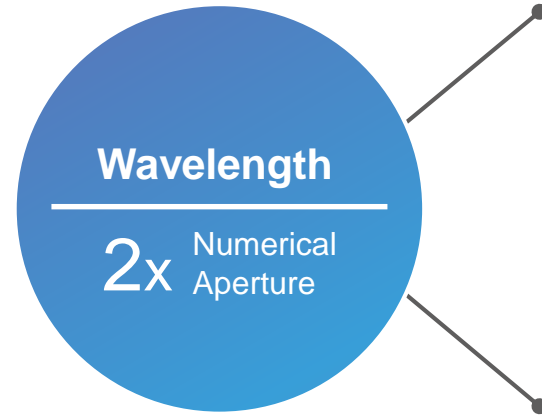
World-Leading NGS Technology and Clinical Diagnostics



Breaking the Diffraction Limit to Increase Flow Cell Density

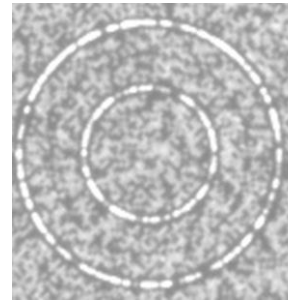


Area equivalents
of a 30x genome

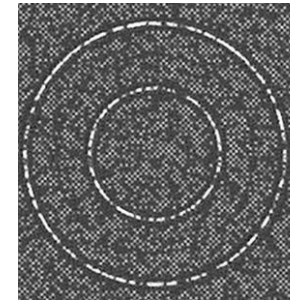


Blue / Green SBS

Greater separation of signal
Allow closer proximity



Diffraction-limited



Super Resolution

Super Resolution Optics

Breaking the diffraction limit
Not yet achieved in any
sequencer

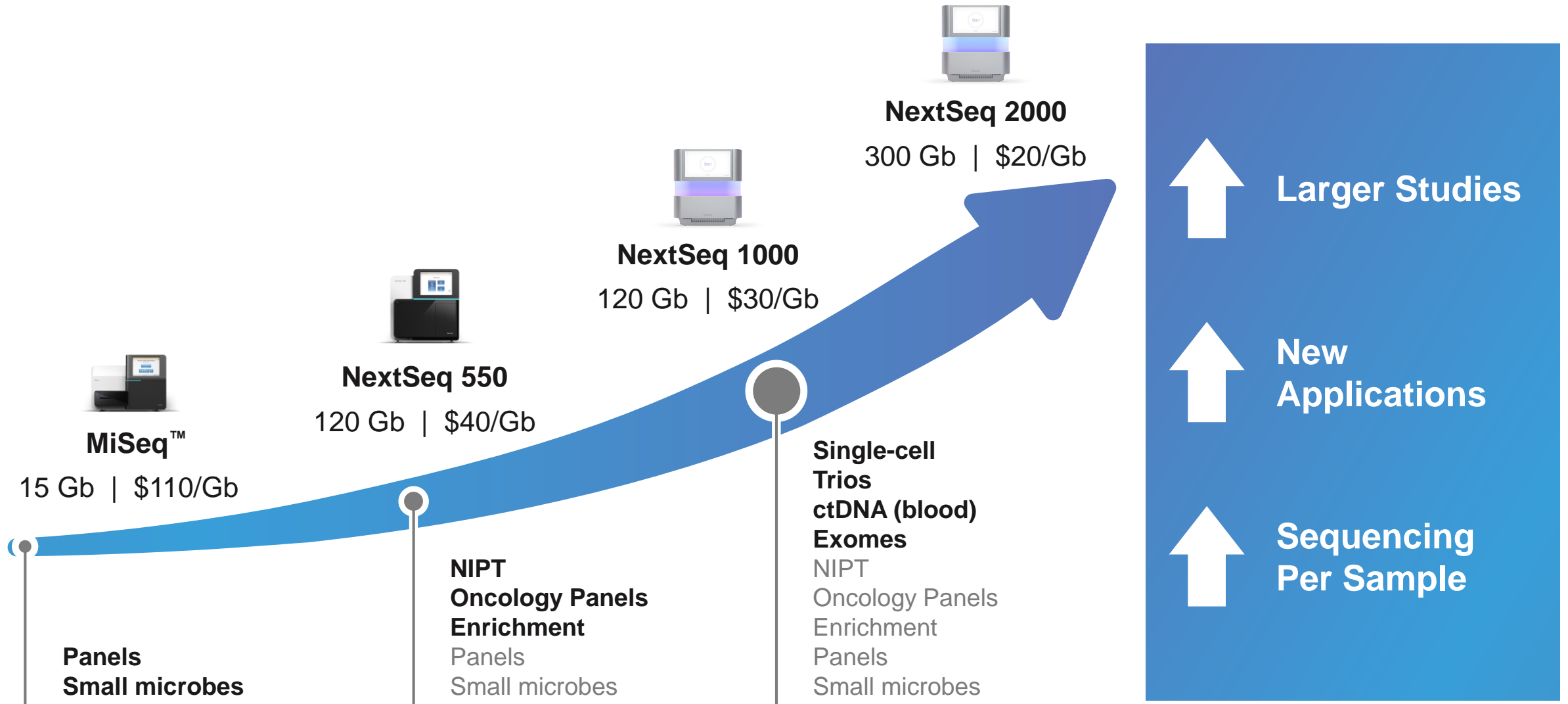
>30x Increase in Data Density*

*Increase in data density versus NextSeq 550

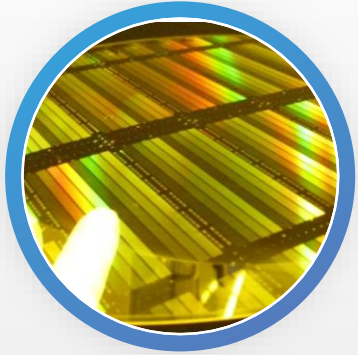
Introducing NextSeq™ 1000 & NextSeq™ 2000



NextSeq™ 1000 & NextSeq™ 2000 Will Drive Higher Intensity Sequencing



Faster and More Flexible Sequencing at Lower Cost



2.5x

Output*



50%

Reduction in Operating Cost



4x

Reduction in Storage Footprint



6x

Faster Secondary Analysis

*NextSeq™ 2000 with P3 Flow Cell vs NextSeq 550

75 Breakthrough
Innovations

Multiple Configurations Address Broad Customer Set

NextSeq™ 2000

\$335K **Q1 20**

NextSeq™ 1000

\$210K **Q4 20**

NextSeq 2000 with
P2 Flow Cell

120G

Q1 20

NextSeq 2000 with
P3 Flow Cell

300G

Q4 20



NextSeq 1000 with
P2 Flow Cell

120G

Illumina in 2020



Enable Breakthrough Research

- NHS Commissioning



Accelerate Clinical Adoption

- Roche Partnership
- NovaSeq™ Dx
- TruSight™ Software Suite
- TruSight™ NIPT



Advance Technology Leadership

- NextSeq™ 1000 and
NextSeq™ 2000

illumina, Inc.

Reconciliation of Non-GAAP Financial Guidance

The Company's future performance and financial results are subject to risks and uncertainties, and actual results could differ materially from the guidance set forth below. Potential factors that could affect our financial results are included from time to time in the public reports filed with the Securities and Exchange Commission, including [Form 10-K](#) for the fiscal year ended December 30, 2018 filed with the SEC on February 11, 2019, [Form 10-Q](#) for the fiscal quarter ended March 31, 2019, [Form 10-Q](#) for the fiscal quarter ended June 30, 2019, and [Form 10-Q](#) for the fiscal quarter ended September 29, 2019. We assume no obligation to update any forward-looking statements or information.

	Fiscal Year 2020
GAAP diluted earnings per share attributable to Illumina stockholders (a)	\$6.45–\$6.65
Amortization of acquired intangible assets	0.19
Non-cash interest expense (b)	0.28
Incremental non-GAAP tax expense (c)	(0.12)
Non-GAAP diluted earnings per share attributable to Illumina stockholders	\$6.80–\$7.00

(a) This guidance does not include any impact resulting from the termination of our merger agreement with Pacific Biosciences of California, Inc. on January 2, 2020.

(b) Non-cash interest expense is calculated in accordance with the authoritative accounting guidance for convertible debt instruments that may be settled in cash.

(c) Incremental non-GAAP tax expense reflects the tax impact related to the non-GAAP adjustments listed.