



41st Annual J.P. Morgan Healthcare Conference

Francis deSouza

President & CEO, Illumina

JANUARY 9, 2023

Forward Looking Statements

This release may contain forward-looking statements that involve risks and uncertainties. Among the important factors to which our business is subject that could cause actual results to differ materially from those in any forward-looking statements are: (i) challenges inherent in developing, manufacturing, and launching new products and services, (ii) our ability to further develop and commercialize our instruments, consumables, and products, including Galleri, the cancer screening test developed by GRAIL; (iii) the European Commission's recent prohibition of our acquisition of GRAIL and the interim measures imposed upon us that prohibit our integration of GRAIL; (iv) the risk that disruptions from the consummation of our acquisition of GRAIL or any associated legal or regulatory proceedings or obligations will harm our business, including current plans and operations; (v) our ability to successfully partner with other companies and organizations to develop new products, expand markets, and grow our business, (vi) the impact to our business and operating results of the COVID-19 pandemic and other macroeconomic factors, 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.

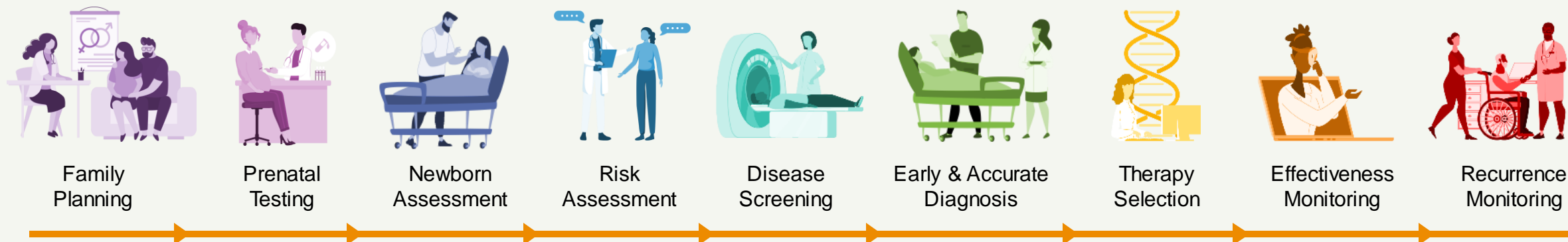
Note Regarding GRAIL

The European Commission adopted an order on September 6, 2022, prohibiting Illumina's acquisition of GRAIL. We are appealing the Commission's decision. The Commission has also adopted an order requiring Illumina and GRAIL to be held and operated as distinct and separate entities. Compliance with the order is monitored by an independent Monitoring Trustee. While the order is in place, Illumina and GRAIL are not permitted to share confidential business information except in cases in which a legal requirement to obtain such information applies, and GRAIL must be run independently and exclusively in the best interests of GRAIL. Commercial interactions between the two companies must be undertaken at arm's length.

Agenda

- ① Illumina Overview
- ② Leadership in Sequencing Platforms
- ③ Acceleration of Clinical Genomics

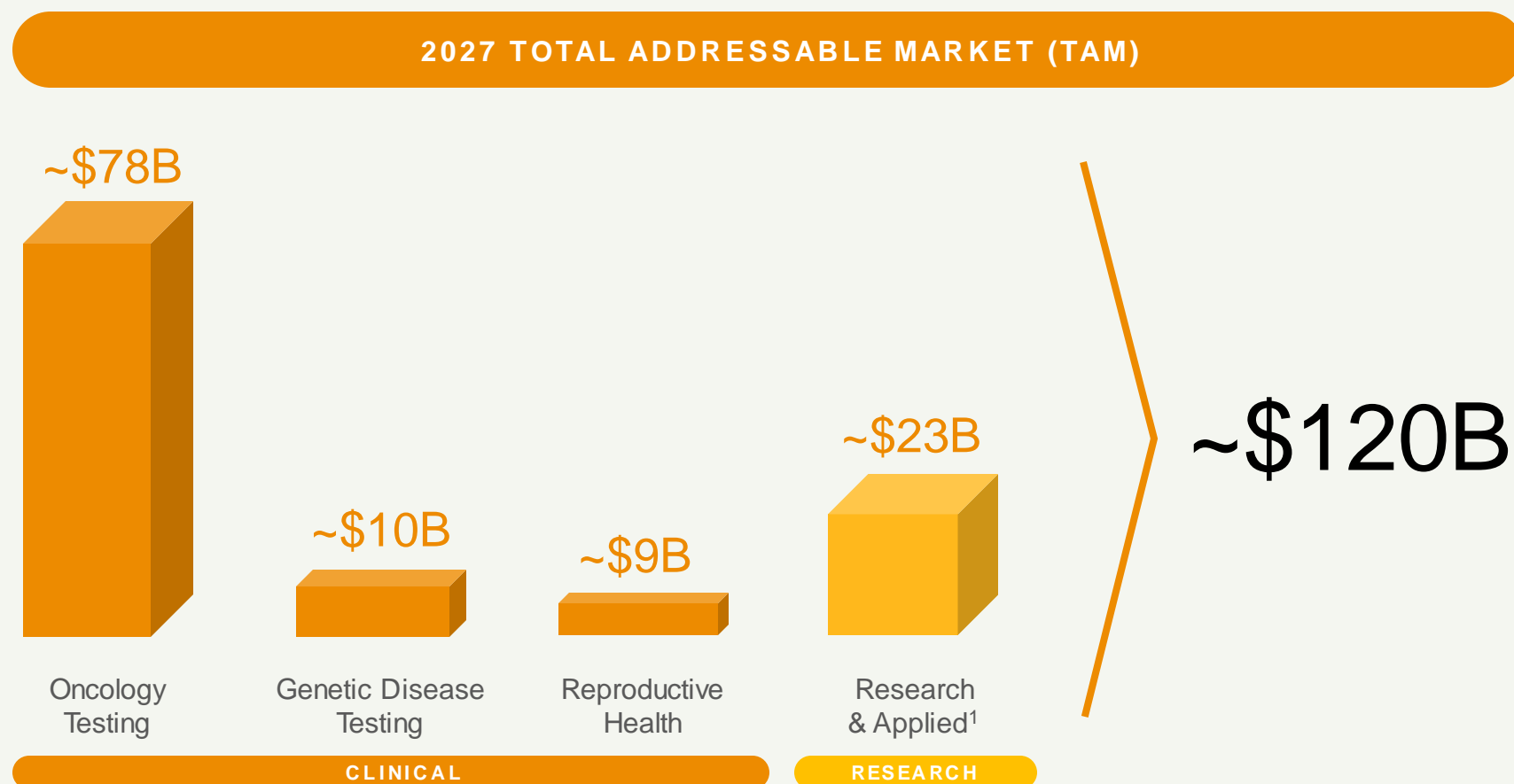
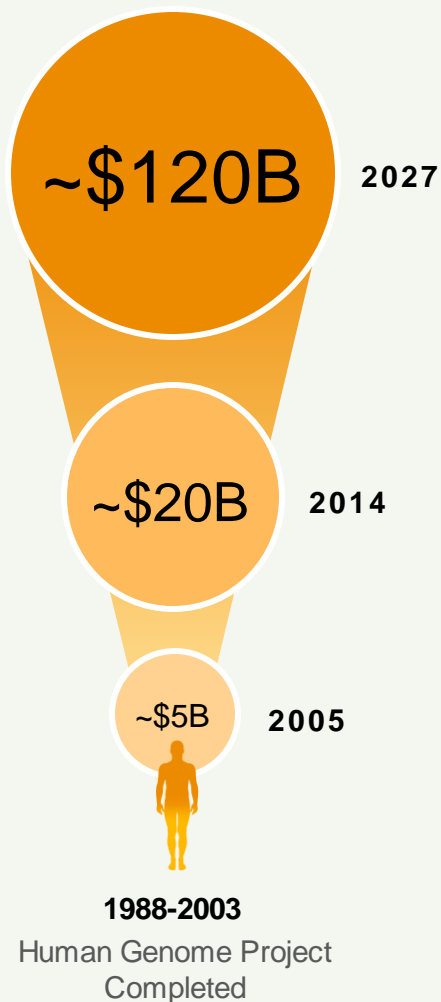
Illumina's Mission is to Improve Human Health by Unlocking the Power of the Genome



Our Vision:

Genomics will transform lifetime health management,
improving outcomes and lowering costs

Illumina's \$120B Addressable Market is Only 7% Penetrated



Source: NHS, NSF, NIH, UN, WHO, and additional publicly available sources, primary market research, secondary reports, Illumina internal estimates.

¹ Research & Applied markets include genetic disease research, cancer research, cell & molecular biology, microbiology, agrigenomics, consumer genomics and infectious disease testing.

TAM Penetration 2022 **7%** —————→ **14%** 2027

Illumina Leads Research and Clinical Genomics with Unmatched Scale, Differentiation and Diversification

SCALE¹

~\$4.5B Revenue
>80% recurring
(consumables and services)²

>9,500 Customers
>155 Countries

~23,000 Instrument installed base
~10,000 Employees

¹ Preliminary fiscal 2022 results for Core Illumina.

² Based on Core Illumina consumables and service and other revenue.

³ Core Illumina % of sequencing consumables shipments.

DIFFERENTIATION¹

Clinical Expertise

62 Countries with
regulatory approvals



NMPA
国家药品监督管理局
National Medical Products Administration



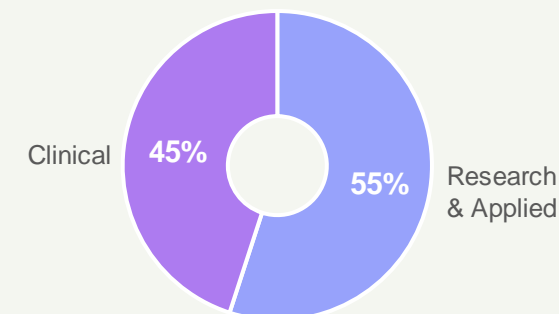
Innovation Track Record

>8,800 Patents

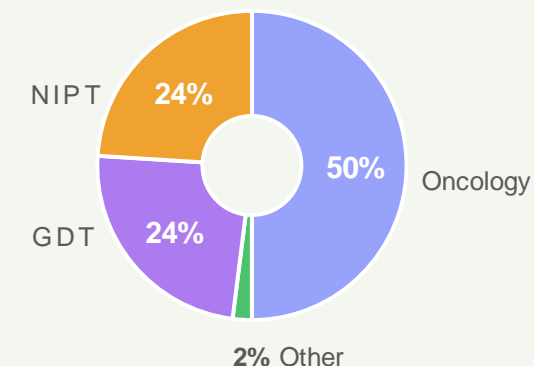
~\$1B Non-GAAP R&D expense

DIVERSIFICATION¹

End Markets³



Clinical Markets³



Long-term targets of **revenue growth** in the mid-teens % and **operating profit growth** in the high-teens %

Illumina Delivered Revenue of \$1.075B in Q4

Q4 2022 Results

Consolidated Revenue

~\$1.075B

- **Record** NextSeq™ 1k/2k shipments and orders
- 750 total sequencing instruments shipped

Core Illumina

Revenue¹

~\$1.058B

Non-GAAP Operating Margin

~16.7%

GRAIL

Revenue

~\$23M

Note: Results are preliminary.

¹ Includes intercompany revenue of ~\$6 million, which is eliminated in consolidation.

Illumina Delivered Revenue of \$4.6B in 2022

FY 2022 Results

Consolidated Revenue

~\$4.576B

Non-GAAP Operating Margin

~10.4%

Non-GAAP tax rate based on R&D capitalization requirements:

Current¹

~31%

If repealed

~8%

Core Revenue²

~\$4.545B

Non-GAAP Gross Margin

~69%

Non-GAAP Operating Margin

~23.5%

GRAIL Revenue

~\$55M

Note: Results are preliminary.

¹ Our full year 2022 Non-GAAP tax rate is ~31%, which represents an increase in tax expense of ~\$100 million assuming the R&D capitalization requirements are not repealed retroactive to 2022.

² Includes intercompany revenue of ~\$24 million, which is eliminated in consolidation.

Illumina Had Strong Demand Across Our Instrument Portfolio

HIGH-THROUGHPUT¹

MID-THROUGHPUT



LOW-THROUGHPUT



NovaSeq™ 6000

NextSeq™ 1k/2k

NextSeq™ 500/550

MiSeq™ | MiniSeq™ | iSeq™

2022 Shipments

~340

~700

~510

~1,670

Total Installed Base

~1,820

~1,570

~5,180

~14,280

2022 Avg. Pull Through
(\$ Thousands)

~\$1,040

~\$135

~\$115

~\$35 MiSeq | \$25 MiniSeq

~ 23,000 Cumulative
installed base

>3,200 2022 total
instruments placed

~\$3B 2022 consumables
revenue

Note: Results are preliminary.
¹ Excludes HiSeq.

We Expect Revenue Growth of 7% to 10% in 2023

Consolidated Guidance

Revenue

\$4.90B–\$5.03B

Non-GAAP Operating Margin

~8%

Growth

7%–10%

Non-GAAP EPS¹

\$1.25–\$1.50

Growth Drivers

- NovaSeq X™ upgrade cycle with strong preorders and 300+ shipments
- Ongoing momentum in mid-throughput after record 2022
- Consumables growth from expanding installed base and demand elasticity – samples, analyses, data
- Accelerating GRAIL Galleri® test adoption driving 80% GRAIL revenue growth³

Core Illumina

Revenue Growth²

6%–9%

Non-GAAP Operating Margin

~22%

Sequencing³: **~8%** | Sequencing Consumables³: **~8%** | Sequencing Instruments³: **~9%**

¹ Reflects a full year non-GAAP tax rate of ~36%, which includes a ~\$75M impact from the R&D capitalization requirements. If repealed, our forecasted non-GAAP tax rate is ~15%.

² Includes intercompany revenue of ~\$35M at the midpoint of revenue guidance, which is removed on a consolidated basis.

³ At midpoint of revenue guidance.

GRAIL

Revenue

\$90M–\$110M

Non-GAAP Operating Loss

~\$670M

① Illumina Overview

② Leadership in Sequencing Platforms

③ Acceleration of Clinical Genomics

The Power, Sustainability and Value of NovaSeq™ X Revolutionize High-Throughput Sequencing



Most Powerful

2x speed improvement
2.5x throughput improvement¹

>20,000 Genomes per year

Most Sustainable

Only high-throughput instrument
with ambient ship reagents

61% Reduction of
climate change
impact²

90% Reduction
in waste

Most Cost Effective

Only high-throughput instrument
with integrated analysis

\$200 Genome with analysis³

¹ Compared to NovaSeq™ 6000.

² Preliminary results of streamlined LCA conducted by external party regarding climate impact per Gb of genetic code of NovaSeq X 10B. 300 cycle kit compared to NovaSeq 6000 S4 300 cycle kit per Gb of genetic code.

³ High-quality whole genome sequencing at scale with alignment, variant calling and lossless compression.

The NovaSeq X series has **>40** new patents pending, and took **5** years and **1,500** scientists, engineers, developers, and designers to create

NovaSeq™ X Has the Strongest Pre-Launch Demand We've Seen for Any Instrument

>140
Orders

>200 Advanced
pipeline

>4x More countries than
NovaSeq™ 6000 launch

>35% Pre-orders by
clinical customers

~15% New to high-throughput
customers

40-50 Q1 expected shipments

>300 2023 expected shipments

Unprecedented demand for NovaSeq X will catalyze a large **multi-year upgrade cycle** and **expand the market**

Customers Want to Sequence 1.5x – 2x More Samples to Drive Greater Discoveries and New Applications



1.5x – 2.0x

MORE SAMPLES



1.5x – 3.0x

MORE ANALYSES PER SAMPLE



3.0x – 4.0x

MORE DATA PER ANALYSIS

0.07% of population with genome sequenced to date¹

78% of individuals in genomic studies are of European ancestry²



1 million
Samples

primarily from
underrepresented communities

AMGEN



35,000
Samples

largest dataset of Black
individuals to be sequenced



100,000
Samples

largest genomic dataset of
Southeast Asian population

¹ Illumina estimate based on transaction data.

² The Missing Diversity in Human Genetic Studies, 2019.

Customers Want 1.5x – 3.0x More Multiomic Analyses on Each Sample



1.5x – 2.0x

MORE SAMPLES



1.5x – 3.0x

MORE ANALYSES PER SAMPLE



3.0x – 4.0x

MORE DATA PER ANALYSIS

Genomics
Transcriptomics
Epigenomics
Proteomics

86%

Reduction in cost to analyze proteins using NGS¹



¹ Compared to mass spectrometry; refers to reduction in cost to analyze 5000 proteins.

Customers Want to Sequence 3.0x – 4.0x More Data to Drive Broader and Deeper Insights



1.5x – 2.0x

MORE SAMPLES



1.5x – 3.0x

MORE ANALYSES PER SAMPLE



3.0x – 4.0x

MORE DATA PER ANALYSIS

Data Output Multiplier

5x

Small panel ► 500 gene panel

40x

500 gene panel ► Whole genome sequencing

12-15x

Tissue profiling ► Liquid biopsy



Fourth Consecutive Year of Record Mid-Throughput NextSeq™ Shipments



NextSeq 1k/2k/550/550 Dx

>1,000 Shipments for second consecutive year
Record Placements

NextSeq 1k/2k

The only mid-throughput sequencer with **built-in analysis**

2x YoY growth in NextSeq 1k/2k consumables revenue

Looking Ahead

XLEAP-SBS™ Chemistry
1H 2024

Low-Throughput Platforms Are a Great Entry Point to Sequencing



Flexibility, ease of use, price

Hundreds of new-to-Illumina customers each year

Proven, trusted technology

>130,000 Publications

More than all other sequencing companies combined

Illumina Complete Long Reads Will Add Long Read Capability to Current and Future Installed Base

Long and Short Reads on **One Instrument**

Simple workflow, high accuracy

90%

less DNA input required¹

~\$600

Price per 30x genome plus ICLR Enrichment²

~15,000

Genomes plus complementary ICLR Enrichment per year on NovaSeq™ X Plus

Two upcoming products:

**Long read human whole
genome assay**

1H 2023

Enrichment panel

2H 2023

¹ Compared to other long read offerings and all on a single instrument.

² Reflects comprehensive, high-accuracy long-read view of genome as low as \$600 for short read genome and long-read complementary assay, including library prep and bioinformatic analysis.

- ① Illumina Overview
- ② Leadership in Sequencing Platforms
- ③ Acceleration of Clinical Genomics

Over 10+ Years, Illumina Has Built Strong Leadership Position in Clinical Genomics

Unmatched clinical expertise and infrastructure

\$1.3B Clinical consumables shipments¹

>5,000 Clinical customers

>1,000 Clinical team

Most product registrations

10 IVD/EUA product families

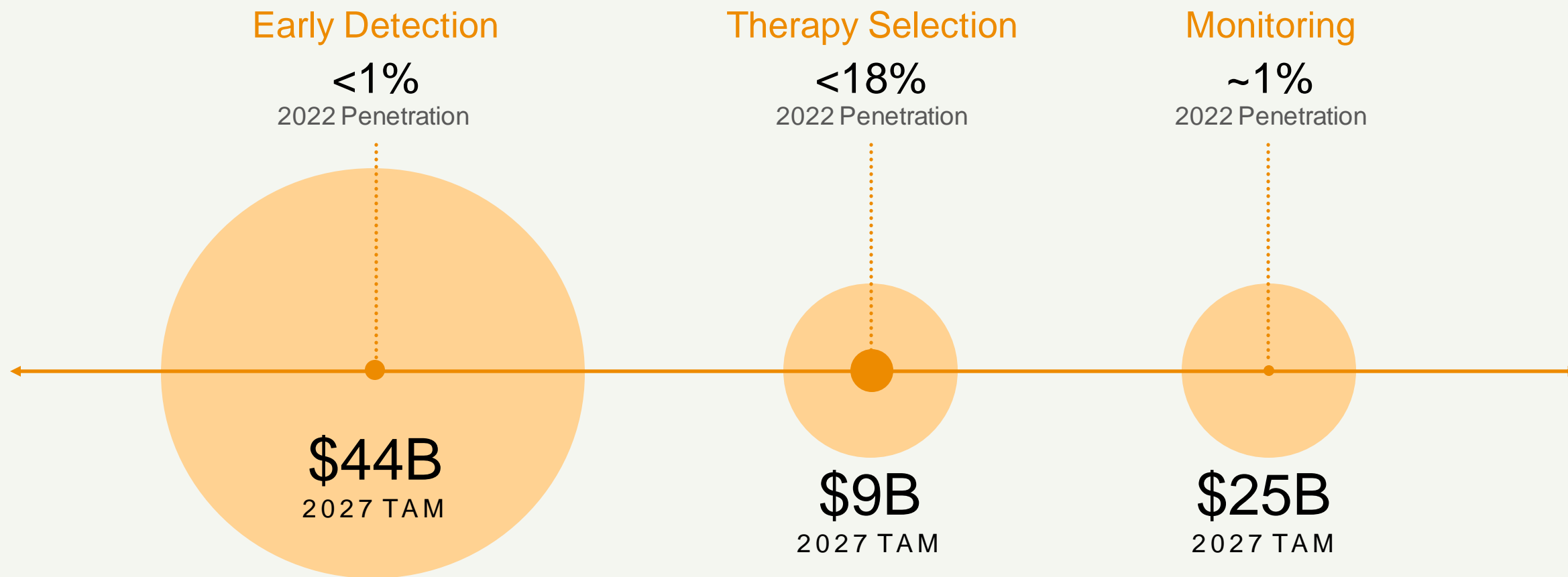
62 Countries with regulatory approvals

1,200+ IVD/EUA registrations



¹ Core Illumina clinical sequencing consumables shipments for 2022.

Oncology is the Largest Clinical Genomics Opportunity at \$78B TAM and is Only 2% Penetrated



Source: NHS, NSF, NIH, UN, WHO, and additional publicly available sources, primary market research, secondary reports, Illumina internal estimates.

Oncology Penetration 2022 **2%** —————→ **8%** 2027

GRAIL Galleri[®] is the Only Commercially Available Multi-Cancer Early Detection Test in the \$44B Early Screening Market

>50

STAGE I-IV
CANCER TYPES

45 of which have no
other screens¹



Galleri blood test helps save lives

Predicted to avert

1 in 3

Cancer deaths within
5-year timeframe²

67%

Stage I-III sensitivity
in deadliest cancers

0.5%

False positive rate

89%

Cancer signal origin
accuracy

Minimal Residual Disease (MRD)

2023

PLANNED LAUNCH

~2–3x

Reduction in turn-around time
vs. tissue-based technologies

¹ 45 of 50 cancers with no other recommended screens in the U.S.

² Hubbell E, Clarke CA, Aravanis AM, Berg CD. Modeled Reductions in Late-stage Cancer with a Multi-Cancer Early Detection Test, Cancer Epidemiol Biomarkers Prev. 2021 Mar;30(3):460-468. doi: 10.1158/1055-9965.EPI-20-1134. As defined by the AJCC Staging Manual.

Galleri® Has Strong Demand From Consumers, Physicians, Health Systems and Payors

Fastest first-year revenue ramp in cancer screening test history

>60,000 Galleri tests

>60 Partnerships with health systems, employers, etc.

>4,500 Physicians

97.1% Satisfaction rate

Progress toward reimbursement



2019 Breakthrough designation

2024/25 Final submission

>300,000 Collective participants across studies

The largest linked datasets of methylation and clinical data in the cancer field

Progress toward first national rollout with NHS

140,000

Participants enrolled in 10.5 months, an “unprecedented number of volunteers”¹

1 million

Person rollout in 2024-2025 if trial is successful



¹ Quote from Charles Swanton, MD, PhD, co-chief investigator of study, GRAIL and National Health Service (NHS) England Complete Enrollment of 140,000 Participants in Largest Study of Multi-Cancer Early Detection Test, (2022, July 18).

GRAIL expects a **revenue CAGR of 60-90%** over the next five years

Illumina is the Leading Provider of Sequencing Systems and Test Kits in the \$9B Oncology Therapy Selection Market

Serving as the platform of choice for therapy selection test developers

>1,100 Customers, up >20% YoY

~1.75 million

Total therapy selection tests performed in 2022, 17% 5-year CAGR

2022 Therapy Selection Penetration¹ <18%

And delivering a leading solution with TruSight™ Oncology (TSO) 500

1,500 Oncology testing service providers

~60% YoY sample growth >500 Global accounts, up >30% YoY

Looking Ahead

>\$100M

2023 revenue from TSO 500²



2023
TSO 500 IVD
FDA Submission

¹ Illumina estimates.

² TSO 500 and associated core consumables.

The \$25B Oncology Minimal Residual Disease Market is an Exciting Emerging Opportunity for Our Sequencing Platforms

Strong early growth in NGS
MRD solutions

>200k NGS MRD tests sold in 2022,¹
~140% YoY growth

>10 NGS-based MRD solutions on
market or in development

2022 Monitoring Penetration¹ **~1%**

Increasing momentum with MRD
reimbursement

Today

4 Indications covered
by Medicare

2 Indications covered by
commercial payers

2023-2025

8+ Indications expecting
coverage

Medicare.gov

Molecular Diagnostics (MoIDx)

¹ Illumina estimates.

illumina®

Member of
**Dow Jones
Sustainability Indices**
Powered by the S&P Global CSA



Illumina's mission: Improve human health by unlocking the power of the genome

Statement regarding use of non-GAAP financial measures

The company reports non-GAAP results for diluted earnings per share, net income, gross margin, operating expenses, including research and development expense, selling general and administrative expense, legal contingencies and settlement, and goodwill impairment, operating income (loss), operating margin, gross profit, other income (expense), constant currency revenue growth, and free cash flow (on a consolidated and, as applicable, segment basis for our Core Illumina and GRAIL segments) in addition to, and not as a substitute for, or superior to, financial measures calculated in accordance with GAAP. The company's financial measures under GAAP include substantial charges such as amortization of acquired intangible assets among others that are listed in the itemized reconciliations between GAAP and non-GAAP financial measures included in this press release, as well as the effects of currency translation. Management has excluded the effects of these items in non-GAAP measures to assist investors in analyzing and assessing past and future operating performance, including in the non-GAAP measures related to our Core Illumina and GRAIL segments. Additionally, non-GAAP net income and diluted earnings per share are key components of the financial metrics utilized by the company's board of directors to measure, in part, management's performance and determine significant elements of management's compensation.

The company encourages investors to carefully consider its results under GAAP, as well as its supplemental non-GAAP information and the reconciliation between these presentations, to more fully understand its business. Reconciliations between GAAP and non-GAAP results are presented in the tables of this release.

Illumina, Inc. Preliminary Results of Operations - Non-GAAP (unaudited)

Our performance and financial results are subject to risks and uncertainties, and actual results could differ materially from the preliminary results set forth below. Some of the 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 January 2, 2022 filed with the SEC on February 18, 2022, [Form 10-Q](#) for the fiscal quarter ended April 3, 2022, [Form 10-Q](#) for the fiscal quarter ended July 3, 2022, and [Form 10-Q](#) for the fiscal quarter ended October 2, 2022. We assume no obligation to update any forward-looking statements or information.

The preliminary unaudited information included in the tables below is approximate and subject to change. We will report our fourth quarter and full year fiscal 2022 results in February.

CONSOLIDATED RECONCILIATION BETWEEN PRELIMINARY GAAP AND NON-GAAP OPERATING MARGIN:

	Fiscal Year 2022
Preliminary GAAP operating margin	(91.2)%
Amortization of acquired intangible assets	3.9
Acquisition-related expenses (b)	2.8
Goodwill impairment (c)	85.5
Restructuring (d)	0.7
Contingent consideration liabilities (e)	(4.5)
Legal contingency and settlement (f)	13.2
Preliminary non-GAAP operating margin (a)	10.4%

CORE ILLUMINA RECONCILIATION BETWEEN PRELIMINARY GAAP AND NON-GAAP OPERATING MARGIN:

	Fourth Quarter 2022	Fiscal Year 2022
Preliminary GAAP operating margin - Core Illumina	6.8%	10.6%
Amortization of acquired intangible assets	1.4	0.9
Acquisition-related expenses (b)	2.7	2.5
Restructuring (d)	2.9	0.7
Contingent consideration liabilities (e)	2.4	(4.5)
Legal contingency and settlement (f)	0.5	13.3
Preliminary non-GAAP operating margin - Core Illumina (a)	16.7%	23.5%

CORE ILLUMINA RECONCILIATION BETWEEN PRELIMINARY GAAP AND NON-GAAP GROSS MARGIN:

	Fiscal Year 2022
Preliminary GAAP gross margin - Core Illumina	68%
Amortization of acquired intangible assets	1
Preliminary non-GAAP gross margin - Core Illumina (a)	69%

(a) Non-GAAP gross profit, included within non-GAAP operating profit, is a key measure of the effectiveness and efficiency of manufacturing processes, product mix and the average selling prices of our products and services. Non-GAAP gross margin and non-GAAP operating margin exclude the effects of the pro forma adjustments as detailed above. Management has excluded the effects of these items in these measures to assist investors in analyzing and assessing past and future operating performance, including in the non-GAAP measures related to our Core Illumina segment.

(b) Amounts consist primarily of legal expenses related to our acquisitions.

(c) Amount consists of goodwill impairment recorded in Q3 2022 related to our GRAIL reporting unit.

(d) Amounts consist primarily of employee severance costs and a lease impairment charge related to the restructuring event that occurred in Q4 2022.

(e) Amounts consist primarily of fair value adjustments for our contingent consideration liability related to the GRAIL acquisition.

(f) Amounts consist of litigation contingency and settlement expense of \$145 million related to the settlement of our litigation with BGI and an accrual of \$458 million for the potential fine that the European Commission may impose on us of up to 10% of our consolidated annual revenues.

CONSOLIDATED RECONCILIATION BETWEEN PRELIMINARY GAAP AND NON-GAAP TAX RATE:

	Fiscal Year 2022	
	Current (b)	If repealed (c)
Preliminary GAAP tax rate	(2)%	1 %
Non-GAAP tax adjustments (a)	33	7
Preliminary non-GAAP tax rate	31 %	8 %

(a) Non-GAAP tax adjustments reflect the tax impact related to preliminary non-GAAP adjustments, the impact of GRAIL pre-acquisition net operating losses on GILTI and the utilization of U.S. foreign tax credits, and the difference between book and tax accounting related to stock-based compensation cost.

(b) Amounts assume that the existing R&D capitalization requirements are not repealed retroactive to 2022 and, as a result, reflect an impact of approximately \$100 million.

(c) Amounts assume that the existing R&D capitalization requirements are repealed retroactive to 2022.

Illumina, Inc.
Reconciliation of Non-GAAP Financial Guidance
(unaudited)

Our future performance and financial results are subject to risks and uncertainties, and actual results could differ materially from the guidance set forth below. Some of the 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 January 2, 2022 filed with the SEC on February 18, 2022, [Form 10-Q](#) for the fiscal quarter ended April 3, 2022, [Form 10-Q](#) for the fiscal quarter ended July 3, 2022, and [Form 10-Q](#) for the fiscal quarter ended October 2, 2022. We assume no obligation to update any forward-looking statements or information.

RECONCILIATION BETWEEN GAAP AND NON-GAAP DILUTED EARNINGS PER SHARE GUIDANCE:

	Fiscal Year 2023
	Current (d)
Consolidated GAAP diluted earnings per share	\$0.03 - \$0.28
Amortization of acquired intangible assets	1.23
GILTI and U.S. foreign tax credits (b)	0.39
Incremental non-GAAP tax expense (c)	(0.40)
Consolidated non-GAAP diluted earnings per share (a)	\$1.25 - \$1.50

(a) Non-GAAP net income and diluted earnings per share exclude the effects of the pro forma adjustments as detailed above. Non-GAAP net income and diluted earnings per share are key components of the financial metrics utilized by the company's board of directors to measure, in part, management's performance and determine significant elements of management's compensation. Management has excluded the effects of these items in these measures to assist investors in analyzing and assessing our past and future operating performance.

(b) Amount represents the impact of GRAIL pre-acquisition net operating losses on GILTI and the utilization of U.S. foreign tax credits.

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

(d) Amounts assume that the existing R&D capitalization requirements are not repealed and, as a result, reflect an impact of approximately \$75 million.

RECONCILIATION BETWEEN GAAP AND NON-GAAP OPERATING MARGIN GUIDANCE:

	Fiscal Year 2023
Consolidated GAAP operating margin	4%
Amortization of acquired intangible assets	4
Consolidated non-GAAP operating margin (a)	8%

	Fiscal Year 2023
Core Illumina GAAP operating margin	21%
Amortization of acquired intangible assets	1
Core Illumina non-GAAP operating margin (a)	22%

(a) Non-GAAP operating margin excludes the effects of the pro forma adjustments as detailed above. Management has excluded the effects of these items in this measure to assist investors in analyzing and assessing past and future operating performance, including in the non-GAAP measure related to our Core Illumina segment.

RECONCILIATION BETWEEN GRAIL GAAP AND NON-GAAP OPERATING LOSS GUIDANCE:

	Fiscal Year 2023
GRAIL GAAP operating loss	\$ (808)
Amortization of acquired intangible assets	138
GRAIL non-GAAP operating loss (a)	\$ (670)

(a) Non-GAAP operating loss excludes the effect of the pro forma adjustment as detailed above. Management has excluded the effect of this item in this measure to assist investors in analyzing and assessing past and future operating performance related to the GRAIL segment.

RECONCILIATION BETWEEN GAAP AND NON-GAAP TAX RATE GUIDANCE:

	Fiscal Year 2023	
	Current (b)	If repealed (c)
Consolidated GAAP tax rate	83 %	6 %
Non-GAAP tax adjustments (a)	(47)	9
Consolidated non-GAAP tax rate	36 %	15 %

(a) Non-GAAP tax adjustments reflect the tax impact related to the non-GAAP adjustments listed above in our "Reconciliation Between GAAP and Non-GAAP Diluted Earnings Per Share Guidance." Management has excluded the effect of these items in this measure to assist investors in analyzing and assessing past and future operating performance.

(b) Amounts assume that the existing R&D capitalization requirements are not repealed and, as a result, reflect an impact of approximately \$75 million.

(c) Amounts assume that the existing R&D capitalization requirements are repealed.