



EXECUTIVE INSIGHTS

Healthcare Providers and the Data Gold Rush: How to Get Your Share

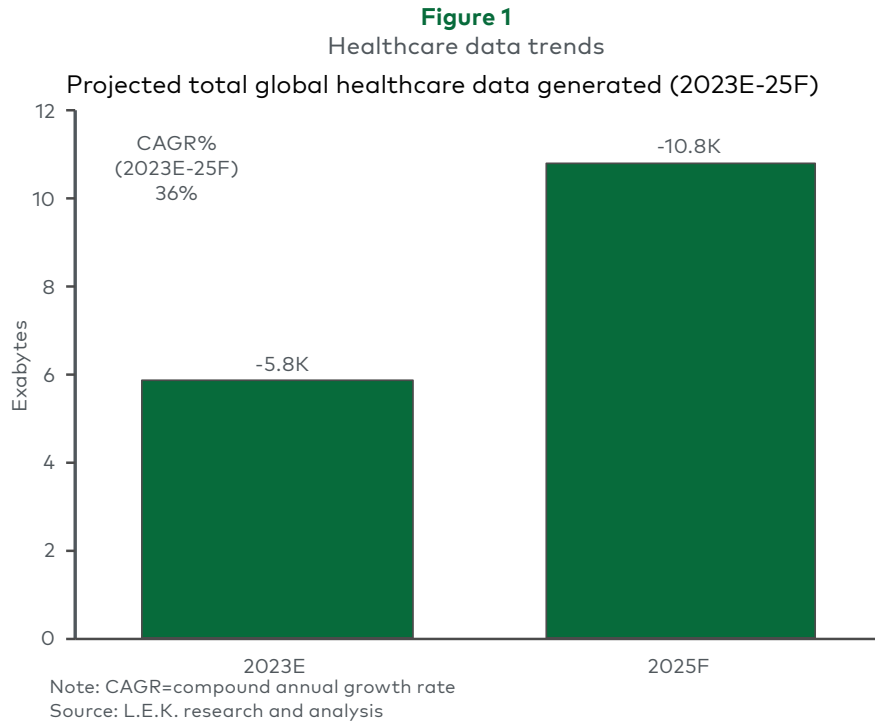
Introduction

The increasing volume, diversity and quality of data in the healthcare space has expanded potential use cases and driven value for industry stakeholders seeking to leverage data-driven analytics to improve patient outcomes, enhance process efficiencies or support operational decision-making. Providers (e.g., hospitals, health systems, academic medical centers, physician groups) are uniquely positioned in the healthcare data value chain as collectors and aggregators of the data they gather during patient treatments and day-to-day business operations. There are many emerging opportunities for healthcare providers to monetize this data, provided they develop an understanding of the various use cases for their de-identified patient data, what makes their data differentiated and valuable, and how to execute on a go-to-market strategy.

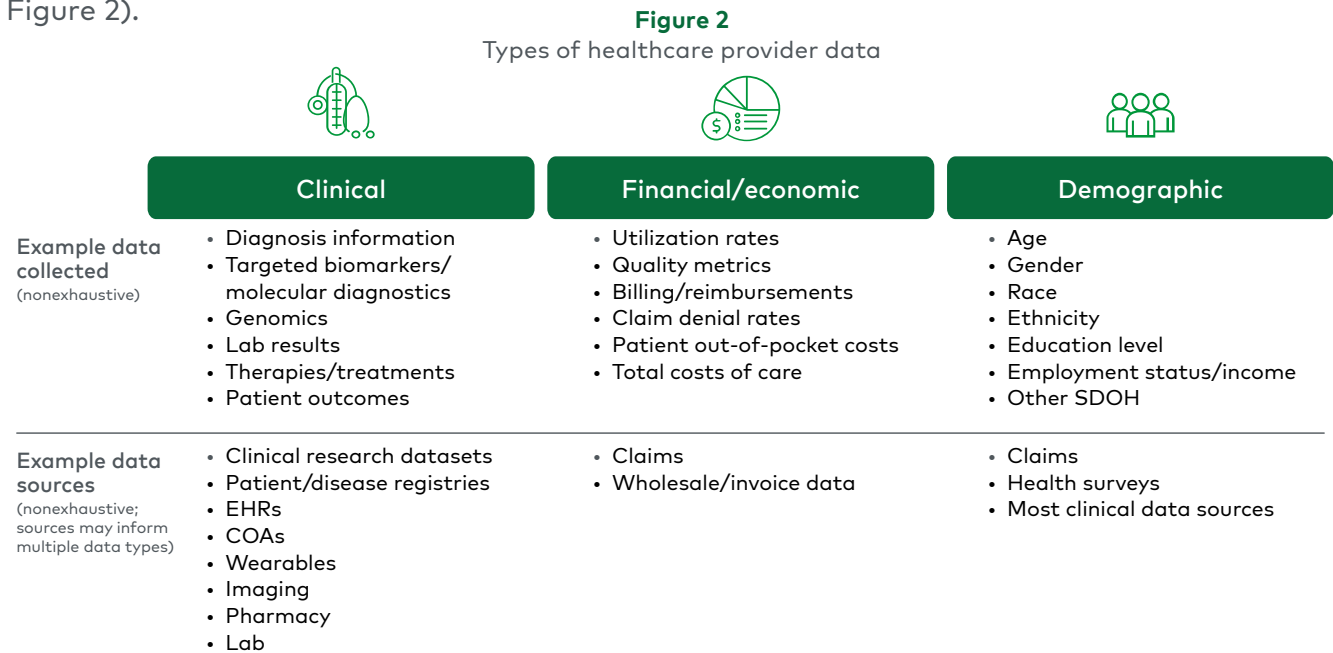
Background and use cases

Healthcare data is expansive and growing, with total global healthcare data expected to grow about 36% annually through 2025, expanding from an estimated 5,800 exabytes generated

in 2023 to around 10,800 exabytes in 2025 (note: 1 exabyte is equivalent to 1 billion gigabytes) (see Figure 1).



The data that healthcare providers collect and manage typically falls into one of three broad categories — clinical data (e.g., related to patient diagnoses, biomarkers, treatments and outcomes), financial data (e.g., related to financial performance, including billing/reimbursement data) and demographic data (e.g., patient-level information including age, gender, income and other factors relating to the social determinants of health (SDOH)) (see Figure 2).



Note: SDOH=social determinants of health; EHRs= electronic health records; COAs=clinical outcome assessments
Source: L.E.K. research and analysis

Provider data comes from a variety of sources, including electronic health records, payer claims, patient/disease registries and clinical research datasets. Each data source may inform one or more types of data (e.g., payer claims include financial data related to billing/reimbursements and demographic data related to patient age, location, etc.).

Providers have an opportunity to monetize the data they collect by selling access/related insights to third-party stakeholders that seek to leverage this information for various use cases related to patient care, commercial operations or regulatory compliance. The primary customers of provider data include life sciences companies (e.g., biopharma companies), medical device companies, payers, regulators, other providers and healthcare data analytics/artificial intelligence (AI)/intermediary companies. Each stakeholder has different use cases for the data (see Figure 3).

Figure 3

Use cases and value propositions for provider data, by stakeholder type

	Patient care	Commercial operations	Regulatory compliance
Life sciences and medical device companies	<ul style="list-style-type: none"> Research and development <ul style="list-style-type: none"> Biomarker/target discovery and validation Protocol design, synthetic control arms Patient stratification and recruiting CDx development Medical affairs <ul style="list-style-type: none"> Medical education Comparative effectiveness 	<ul style="list-style-type: none"> Value analysis <ul style="list-style-type: none"> Pricing strategy (optimization and justification) HEOR Payer engagement and reimbursement support Commercial marketing <ul style="list-style-type: none"> Brand analytics and commercial effectiveness Competitive intelligence Patient engagement 	<ul style="list-style-type: none"> Market access Pharmacovigilance (e.g., post-market surveillance)
Payer	<ul style="list-style-type: none"> Comparative effectiveness Benefit/product design support 	<ul style="list-style-type: none"> Patient engagement (e.g., patient education, decision support) Care management benchmarking/oversight Price transparency 	<ul style="list-style-type: none"> Fraud, waste and abuse analysis
Providers	<ul style="list-style-type: none"> Treatment patterns Comparative effectiveness Clinical decision support 	<ul style="list-style-type: none"> Competitive benchmarking Internal process improvements 	N/A
Regulators	<ul style="list-style-type: none"> Data management, remediation and enhancement Disease landscape/epidemiology SDOH-based risk assessments Program impact analytics (e.g., health/clinical outcomes) 	N/A	<ul style="list-style-type: none"> Fraud, waste and abuse analysis Beneficiary identity assurance and eligibility Provider compliance/credentialing Pharmacovigilance
Healthcare data analytics/AI/intermediary companies	<ul style="list-style-type: none"> Interoperability/data integration Clinical trial optimization 	<ul style="list-style-type: none"> Price transparency Patient engagement RCM analytics 	<ul style="list-style-type: none"> Compliance support

Relative value proposition



Note: CDx=companion diagnostics; HEOR=health economics and outcomes research; SDOH=social determinants of health; RCM=revenue cycle management
 Source: L.E.K. research and analysis

Provider data has key value propositions across use cases, including for:

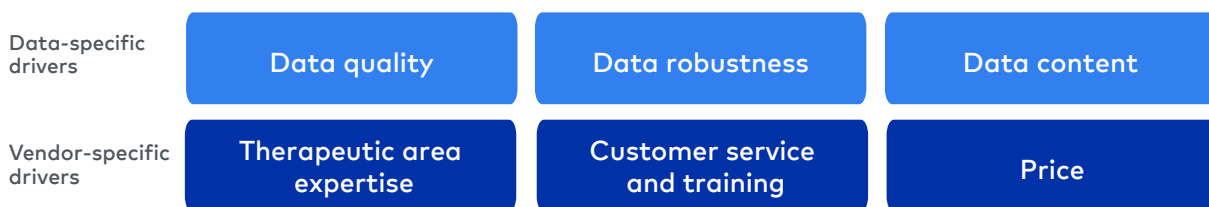
- Patient care**
 - Supporting accurate clinical information sharing and decision support between providers, payers and life sciences/medical device companies

- Identifying new and effective treatments that improve patient outcomes (e.g., by providing patient genomic/biomarker data and supplementing clinical trial data for pharmaceutical companies)
- **Commercial operations**
 - Improving efficiency of care delivery by giving stakeholders insight into patient care journeys and clinical/staff workflows (e.g., by benchmarking for other providers and supporting care management for payers)
 - Gaining insights to support business decision-making (e.g., by supporting measurement of patient-engagement effectiveness for payers and aiding in product development for data analytics companies)
- **Regulatory compliance**
 - Enabling market oversight/surveillance and supporting credentialing, identification of benefit eligibility, etc.
 - Allowing stakeholders to utilize different real-world datasets to support the detection, assessment, monitoring and prevention of adverse events

What makes data differentiated and valuable

While data is common, it is not always differentiated and valuable. Many forms of data are commoditized and widely accessible to stakeholders across the healthcare landscape (e.g., claims data), and more novel data can be of poor quality or of limited breadth/depth or lack integration with other datasets. Drivers of data differentiation and value include data-specific drivers such as quality, robustness and content (e.g., depth, breadth), as well as vendor-specific drivers related to a provider’s investments and overarching data monetization strategy, including therapeutic area expertise, customer service and training, reputation, and pricing (see Figure 4).

Figure 4
Key drivers of data differentiation and value



Source: L.E.K. research and analysis

Among the key data-specific drivers of differentiation and value are:

- **Data quality:** Data that can be delivered in a form that is ready for analytics to be performed, including requiring minimal scrubbing/cleaning
- **Data robustness:** Data that is reliably accurate/complete across each of the data dimensions available
- **Data content:** Valuable data assets are typically differentiated along one or more content-related dimensions, including data that is:
 - **Unique/scarce:** Data includes measurements of a unique treatment or response variable (e.g., scarce/specialized genomic data), allowing researchers to test new/innovative hypotheses
 - **Real time:** Data is up to date, allowing researchers to test novel hypotheses in real time
 - **Deep:** Data measures a large and diverse patient population, allowing researchers to obtain greater statistical power in their analyses
 - **Broad:** Data measures numerous variables per patient, enabling researchers to perform multidimensional analyses
 - Data breadth may be supported by the integration of a provider's core data with other internal and external data sources (e.g., cross-referenced with other vendor partners' data), enabling researchers to have a more comprehensive view of a patient
 - Data breadth may be impacted by the level of anonymization, which depends on to what degree patient consent has been obtained
 - **Longitudinal:** Data repeatedly measures a patient population across a time interval (e.g., before/during/after a treatment), allowing researchers to estimate treatment effects across a patient's care journey

The importance of these drivers is illustrated by the variation in commercial value observed for various patient records. For example, episodic patient data can sell for approximately \$75 per record, while an individual's genomics data can sell for about \$1,300 per record. Each of these patient records may be worth two to three times more, depending on levels of quality, robustness, detail or degree of integration with other datasets.

Data-specific drivers of differentiation and value can be further supported by vendor-specific drivers related to provider investments and strategy, including therapeutic area expertise (e.g., vendor specialization), customer service/training (e.g., quality of support staff and ability to address customer concerns) and competitive pricing. Each of these vendor-specific drivers is an additional area that providers can focus on to drive incremental value for their customers.

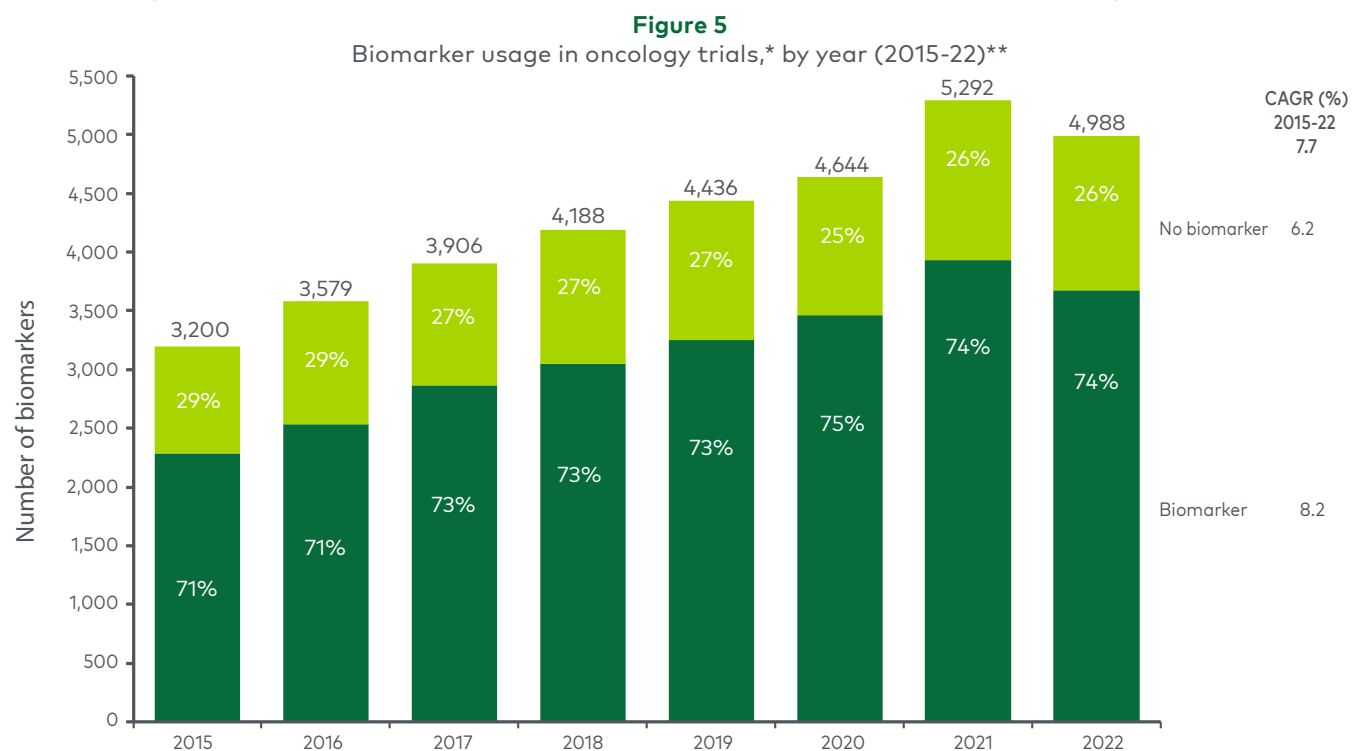
Data monetization in oncology

The relative value proposition of rich datasets and the challenges associated with limited access to quality data have varying levels of applicability across therapeutic areas. The opportunity for data monetization is particularly applicable in the oncology space due to:

- The **complexity** of cancer care, including the variability of treatment plans and the variable efficacy of treatments across patient groups (e.g., patients with certain biomarkers and certain cancer types)
- The **high costs** associated with cancer treatments and clinical trials that stakeholders seek to manage/control
- The **duration** and the **number of patient touchpoints** during cancer treatment that generate large amounts of data

The field of biomarker research is a salient example illustrating the opportunity for data monetization among oncology providers. Biomarker discovery continues to be an active area for research across therapeutic areas (including chronic pain, cardiovascular and metabolic diseases, Alzheimer’s) and uses (e.g., diagnostic, prognostic, predictive, pharmacodynamic).

Biomarkers are used in cancer treatment to provide more targeted therapies and treatment strategies. The use of biomarkers in oncology clinical trials has continued to accelerate, accounting for approximately three-fourths of new trial starts in 2022 (see Figure 5).



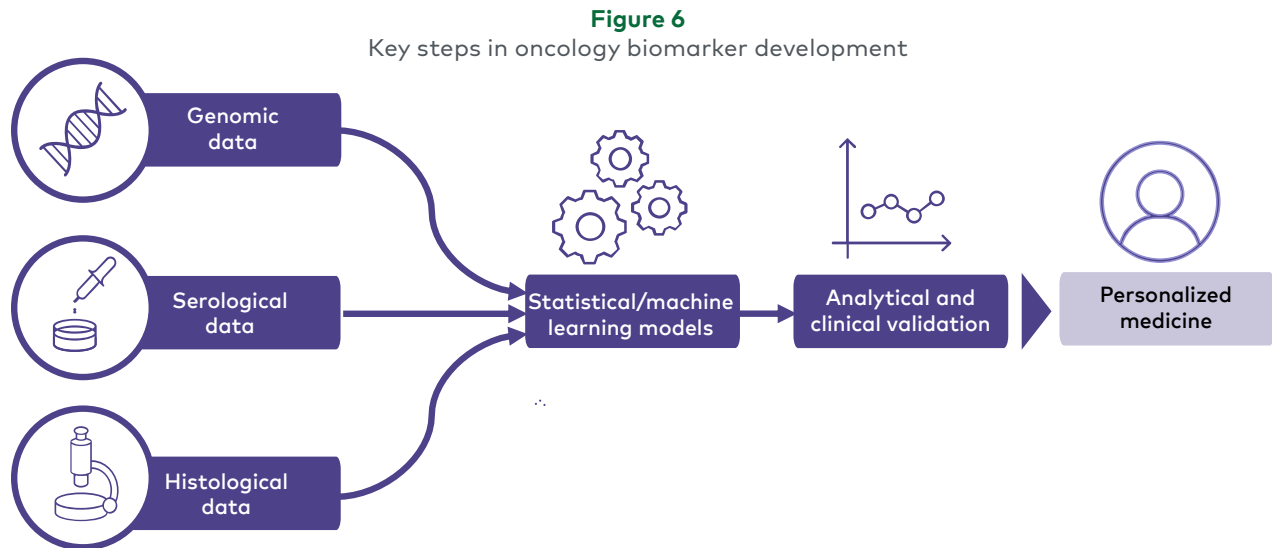
*Based on trial start dates

**2016-2021

Note: CAGR=compound annual growth rate

Source: L.E.K. research and analysis; Trial Trove

The initial stages of oncology biomarker discovery and development typically require research groups to feed various sources of clinical data (e.g., genomic, serological and histological data) into statistical/machine learning models in order to identify indicators of disease presence, severity and treatment efficacy for an individual patient (see Figure 6).



Source: L.E.K. research and analysis

Oncology biomarker discovery is typically impeded by data limitations, including:

- Low statistical power due to small patient panels (i.e., small numbers of patients observed with certain biomarkers and certain cancer types)
- Lack of reproducibility across patient groups due to biases in cohorts resulting from lack of quality patient data
- Lack of longitudinal views on patients over time

Each of these limitations represents an opportunity for oncology providers to monetize their data and help address these pain points.

Executing a data monetization strategy

Successful monetization of provider data requires sellers to engage in preplanning (e.g., developing strategies for a business model for pricing, determining which customer segments to target, and deciding whether to partner with a third-party data vendor), executing technology investments (e.g., to get data into workable form, to develop application programming interfaces to improve data accessibility, and to keep data secure and compliant with patient privacy/consent regulations), and maintaining an ongoing focus on marketing, customer support and product enhancements.

L.E.K. Consulting has helped buyers and sellers of data think through the data monetization strategy and operations from preplanning to execution and ongoing investments. If you have questions or would like to discuss data monetization further, please contact us at healthcare@lekinsights.com.

Endnotes

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