

Global Liquid Biopsy Market Report:

Assessment, Trends,
and Forecast (2023–2028)



About The Deerborne Group

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The firm's areas of expertise include advisory boards, branding, business cases, CLIA laboratory operations, clinical trials, due diligence, commercialization, go-to-market strategy, KOL strategy and development, health economics, interim management services, marketing, market access, market analysis, portfolio planning, private equity strategy, product development, publication planning, regulatory strategy and submissions, reimbursement strategy and dossiers, sales operations effectiveness, segmentation and targeting, strategy development, value propositions, and venture capital strategy. Follow The Deerborne Group on **LinkedIn**, **Facebook**, or **Twitter**.

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COMPASS 360° provides key decision-makers with actionable insights as the basis for developing new strategies and making better-informed decisions.

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Executive Summary

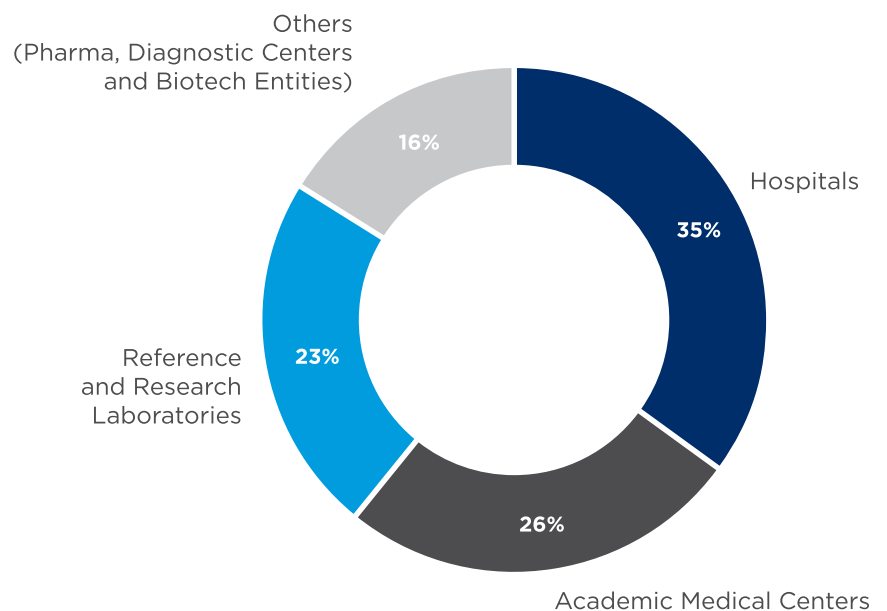
Advances in the fields of genomics and precision diagnostics are quickly converging and driving significant change in the diagnosis, treatment, and monitoring of patients and their diseases. At the core of this transformation is the implementation of liquid biopsy testing.

This new report provides an in-depth analysis of the global liquid biopsy market, including assessment, trends, and forecasts spanning from 2023 to 2028. The report estimates that the global liquid biopsy market is forecasted to be valued at \$5.4 billion in 2023, with a projected compounded annual growth rate (CAGR) of 14.5% during the forecast period, ultimately reaching a valuation of \$10.64 billion by 2028.

The report covers the major laboratories, instrument manufacturers, market size, segmentation, and the major trends that are driving growth in the global liquid biopsy market. The liquid biopsy market is poised for significant change in the coming years due primarily to the advancements in NGS technology and platforms, the rising prevalence of cancer and other chronic diseases, and the increasing demand for personalized medicine. Liquid biopsy tests detect genetic variants associated with various diseases and are increasingly used in clinical settings to guide treatment decisions and monitor disease progression.

Liquid biopsies represent a groundbreaking technology with the potential to revolutionize cancer care and other disease states. In the clinical and hospital setting, that accounts for 35% of the market, they offer promising applications such as early detection, personalized

Market Size, Value, 2023: \$5.40 billion



Executive Summary (cont.)

treatment guidance, and real time monitoring of disease progression. While the widespread adoption of liquid biopsies for population-wide screening is still a subject of ongoing discussion, their use in selecting and monitoring patients receiving immunotherapy has gained traction, enabling the advancement of precision oncology. This shift is fueled by the increasing prevalence of a simple and non-invasive blood sample collection method, which renders traditional, painful, and potentially risky tissue biopsies less necessary. Consequently, next-generation sequencing (NGS)-based liquid biopsy testing options are rapidly being developed by commercial laboratories such as Guardant, Foundation Medicine, Natera, Tempus, and others.

The global liquid biopsy market is dominated by North America, with a market share of 43% in 2022. Key stakeholders in the liquid biopsy market are highlighted providing a clear understanding of the competitive landscape, along with detailed profiles of major companies operating globally.

Many of these laboratories are diligently pursuing regulatory approval, seeking companion diagnostics (CDx) claims through the United States (US) Federal Drug Administration (FDA) and Japan's Pharmaceuticals and Medical Device Agency (PMDA) in collaboration with their pharmaceutical co-developers. While there are major technical challenges that liquid biopsy test designers need to overcome, for widespread adoption, securing reimbursement from governmental and commercial payors, must be addressed by these laboratories.

The report features insights derived from interviews with dozens of industry experts and key opinion leaders (KOLs). Report sources were consolidated using COMPASS 360°, The Deerborne Group's proprietary end-to-end process for collecting, analyzing, and interpreting market insights and competitive intelligence. The primary aim of this report is to provide key decision makers with actionable insights that can serve as the foundation for developing new strategies and making better informed decisions.

For more insights and information about this report, please feel free to either call us at +1 (949) 303 8198 or email us at info@thedeerbornegroup.com. Alternatively, you can get in touch with us on our [website](#).



Table of Content

01 Global Liquid Biopsy Market: Executive Summary

1.1 Introduction

1.1.1 Executive Summary

02 Global Liquid Biopsy Market: 2023-2028 (\$ billion)

2.1 Global Liquid Biopsy Market

2.1.1 Market size – Global Liquid Biopsy Market

2.2 By Segmentation

2.2.1 Hospitals

2.2.2 Academic Medical Centers

2.2.3 Reference Laboratories, etc.

2.3 By Distribution Channels

2.3.1 Direct Sales

2.3.2 Distribution

2.3.4 Others

2.4 By Disease States

2.4.1 Reproductive

2.4.2 Oncology

2.4.2.1 Breast

2.4.2.2 Lung

2.4.3.3 Ovarian

2.4.3.4 Prostate

2.4.3 Cardiology

2.5 By Region

2.5.1 North America

2.5.2 Europe

2.5.3 APAC

03 Global Liquid Biopsy Market Overview

3.1 Industry Structure and Value Chain Analysis

3.2 Growth Prospects

Table of Content

3.3 Market Drivers

3.4 Market Restraints

3.5 Porter's 5 Analysis

3.6 Opportunities

3.7 PESTLE Analysis

3.8 Global Liquid Biopsy Market SWOT Analysis

3.9 Cost Timeline of Liquid Biopsy Testing

3.10 Liquid Biopsy – Technologies (used for detection)

3.10.1 Cell-Free DNA (cfDNA)

3.10.2 Circulating Tumor Cells (CTCs)

3.10.3 Circulating Tumor DNA (ctDNA)

3.10.4 Others (i.e. Extracellular Vesicles, RNA, etc.)

04 Competitor Analysis

4.1 Competitive Dynamics

4.2 Laboratories

4.2.1 Exact Sciences (Thrive)

4.2.2 Foundation Medicine

4.2.3 Grail

4.2.4 Guardant

4.2.5 LabCorp (PGDx)

4.2.6 Natera

4.2.7 Quest Diagnostics (Haystack)

4.2.8 Tempus Labs

4.3 Pharmaceutical Companies

4.3.1 Amgen

4.3.1.1 AMGEN LUMAKRAS® (sotorasib) Lung Cancer (Guardant360 CDx)

4.3.2 AstraZeneca

4.3.2.1 AstratZeneca IRESSA (gefitinib) Lung Cancer (FoundationOne Liquid CDx)

4.3.2.2 AstraZeneca TAGRISSO (Osimertinib) Lung Cancer (Guardant360 CDx)

4.3.2.3 AstraZeneca ENHERTU (fam-trastuzumab deruxtecan-nxki) Lung Cancer (Guardant360 CDx)

4.3.2.4 AstraZeneca TAGRISSO (Osimertinib) Lung Cancer (FoundationOne Liquid CDx)

4.3.2.5 AstraZeneca LYNPARZA (olaparib) Prostate Cancer (FoundationOne Liquid CDx)

Table of Content

4.3.3 Clovis Oncology

4.3.3.1 Clovis Oncology RUBRACA (rucaparib) Prostate Cancer (FoundationOne Liquid CDx)

4.3.3.2 Clovis Oncology RUBRACA (rucaparib) Ovarian Cancer (FoundationOne Liquid CDx)

4.3.4 Genentech

4.3.4.1 Genentech ROZLYTREK (entrectinib) Lung Cancer (FoundationOne Liquid CDx)

4.3.4.2 Genentech ALECENSA® (alectinib) Lung Cancer (FoundationOne Liquid CDx)

4.3.4.3 Genentech TARCEVA® (erlotinib) Lung Cancer (FoundationOne Liquid CDx)

4.3.5 Johnson & Johnson

4.3.5.1 J&J RYBREVANT® (amivantamab-vmjw) Lung Cancer (Guardant360 CDx)

4.3.6 Menarini

4.3.6.1 Menarini ORSERDU™ (elacestrant) Breast Cancer (Guardant360 CDx)

4.3.7 Novartis

4.3.7.1 Novartis TABRECTA (capmatinib) Lung Cancer (FoundationOne Liquid CDx)

4.3.7.2 Novartis PIQRAY (alpelisib) Breast Cancer (FoundationOne Liquid CDx)

4.4 Academic Medical Centers

4.4.1 (e.g., MD Anderson, Mount Sinai, MSK, etc)

05. Mergers & Acquisitions Highlights

5.1 Agilent Technologies/Resolution Bioscience

5.2 Exact Sciences/Thrive

5.3 Illumina/GRAIL

5.4 LabCorp/PGDx

5.5 NeoGenomics/Inivata

5.6 Pharma& Schweiz/Clovis Oncology

5.7 Quest Diagnostics/Haystack Oncology

5.8 Roche/Foundation Medicine

Table of Content

06. Regulatory Overview (US, EU, Japan)

07. Guidelines for Liquid Biopsies

7.1 US - ASCO

7.2 US - NCCN

7.3 Europe - ESMO

7.4 Japan - JSCCR

08. Reimbursement Overview (Regional Highlights - US/EU/Japan)

8.1 FoundationOne CDx has national coverage for qualifying Medicare and Medicare Advantage patients across all solid tumors.

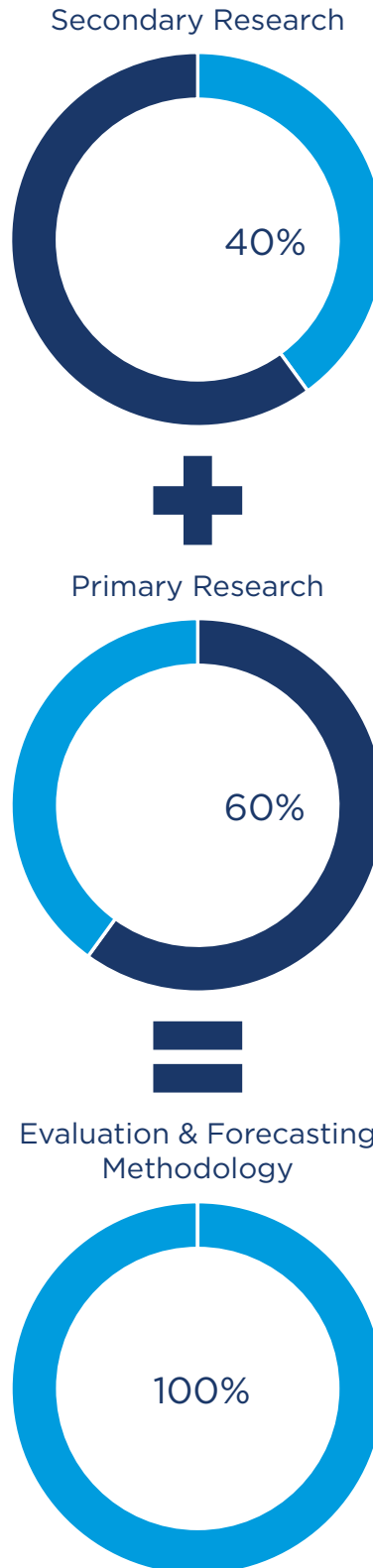
8.2 Guardant Health has Medicare Coverage for Guardant360 Response™ to Monitor Cancer Patient Response to Immunotherapy.

09. KOL Commentary (US/EU) 24 Physicians/PhDs

10. Conclusion and Recommendation

Research Methodology

The findings and conclusions of this report are based on information gathered from both primary and secondary research sources.



What is Our Research Methodology?

Primary Research

Conducting primary interviews on an ongoing basis with industry participants and commentators to validate data and analysis. A typical research interview fulfills the following functions:

- It provides first-hand information on the market size, growth trends, competitive landscape, outlook, etc.
- Helps in validating and strengthening the secondary research findings.
- Primary research involves e-mail interactions, telephonic, and face-to-face interviews for each market, category, segment, and sub-segment across geographics.

Secondary Research

The secondary research sources that are typically referred to include, but are not limited to:

- Company websites, annual reports, financial reports, broker reports, and investor presentations.
- Internal and external proprietary databases, relevant patent, and regulatory databases.
- National government documents, statistical databases, and market reports.
- News articles, press releases, and webcasts specific to the companies available in the market.

The participants who typically take part in such a process include, but are not limited to:

- Industry participants: CEOs, VPs, market intelligence managers, and national sales managers.
- Outside experts: Valuation experts and research analysts specializing in specific markets.
- Key opinion leaders specializing in different areas corresponding to different industry verticals.

Assessment of the Global Liquid Biopsy Market

Global Liquid Biopsy Market Definition

The global liquid biopsy market refers to the collective economic activity associated with the research, development, production, distribution, and commercialization of technologies, products, and services related to liquid biopsy techniques. Liquid biopsy is a non-invasive medical procedure that involves the analysis of biomarkers, such as circulating tumor DNA (ctDNA), circulating tumor cells (CTCs), exosomes, and other molecules present in bodily fluids, typically blood. These biomarkers provide valuable insights into various medical conditions, especially cancer, by offering information about disease presence, progression, and treatment response.

Liquid biopsy promises to revolutionize healthcare by providing less invasive and more frequent monitoring of disease status. Liquid biopsy is likely to play an increasingly important role in the early detection, treatment, and management of various medical conditions.

Liquid biopsies have substantially changed the field of clinical oncology by making tumor collection easier, allowing for continuous monitoring through repeated sampling, developing personalized therapy regimens, and screening for therapeutic resistance. Liquid biopsies include extracting tumor-derived entities in cancer patient's body fluids, such as circulating tumor cells, circulating tumor DNA, tumor extracellular vesicles, and so on, and then analyzing the genomic and proteomic data stored within them. As mentioned in the study, methods for isolating and analyzing liquid samples have rapidly evolved in recent years, revealing better insights about tumor features such as tumor growth, tumor staging, heterogeneity, gene alterations, and clonal evolution, among others. Liquid biopsies from cancer patients have opened new detection, monitoring, and treatment pathways.

Precision medicine and screening indicators for therapeutic resistance are at the heart of this approach. Though liquid biopsies are still in the early stages of development, their non-invasive nature promises to usher in new eras in clinical cancer. This study aims to provide an overview of the current liquid biopsy market and its use in reproductive oncology, breast, lung, ovarian, prostate, and cardiology.

Advantages of Liquid Biopsy

Liquid biopsy offers several advantages over traditional tissue biopsies, making it a valuable tool in medical diagnostics and research. Some of the key benefits of liquid biopsy include:

Non-Invasiveness



One of the most prominent advantages of liquid biopsy is its non-invasive nature. Unlike traditional tissue biopsies, which require surgical procedures to obtain samples, liquid biopsy involves a simple blood draw or collection of other bodily fluids. This reduces patient discomfort, the risk of complications, and the need for anesthesia or recovery time.

Real-Time Monitoring



Liquid biopsy allows for real-time monitoring of disease progression and treatment response. Since samples can be collected more frequently without causing harm, healthcare professionals can track changes in biomarkers over time and adjust treatment strategies accordingly.

Early Detection



Liquid biopsy can detect molecular changes associated with diseases, such as cancer, at earlier stages than traditional methods. This early detection can lead to timely intervention, potentially improving patient outcomes by enabling treatment before the disease progresses.

Sampling Diversity



Using blood or other bodily fluids provides a snapshot of genetic and molecular information from multiple sites within the body. In contrast, traditional biopsies only offer information from a single tissue location, which might not fully represent the heterogeneity of a tumor.

Advantages of Liquid Biopsy



Accessibility

Liquid biopsy samples can be collected in various clinical settings, including hospitals, clinics, and remote locations. This accessibility allows for broader patient participation and greater inclusivity in clinical research.



Reduced Risk

Tissue biopsies carry risks associated with anesthesia, bleeding, infection, and complications from the surgical procedure. Liquid biopsy eliminates these risks, making it a safer option, especially for patients who may not be suitable candidates for invasive procedures.



Dynamic Insights

Tumor DNA shed into the bloodstream provides dynamic information about genetic mutations and alterations as they occur during disease progression. This can lead to a better understanding of tumor evolution and the development of more targeted treatments.



Minimal Residual Disease Monitoring

Liquid biopsy detects minimal residual disease, slight traces of cancer cells that remain in the body after treatment. Monitoring MRD can help assess treatment efficacy and guide decisions regarding additional therapies.



Personalized Treatment

By analyzing genetic mutations and molecular markers, liquid biopsy can guide personalized treatment plans based on the specific characteristics of a patient's disease. This can improve treatment outcomes and reduce the risk of ineffective treatments.

Advantages of Liquid Biopsy



Less Patient Burden

Traditional biopsies often require patients to undergo surgery or invasive procedures, leading to physical and emotional stress. Liquid biopsy offers a less burdensome option that aligns with patient preferences.



Repeatable and Longitudinal Analysis

The non-invasive nature of liquid biopsy allows for repeated sampling over time without causing harm to the patient. This longitudinal analysis can provide insights into disease progression, treatment response, and the emergence of resistance.



Personalized Treatment

Liquid biopsy can be used to select patients for clinical trials based on their molecular profiles. This enriches clinical trial populations, with individuals more likely to respond to experimental treatments, leading to more efficient and informative trials.

Disadvantages of Liquid Biopsy



Sensitivity and Specificity

Liquid biopsy techniques can sometimes have lower sensitivity and specificity than traditional tissue biopsies. This means that they may only sometimes accurately detect low levels of biomarkers or distinguish between benign and malignant conditions.



Technical Challenges

The isolation and detection of circulating biomarkers from complex bodily fluids like blood can be technically challenging due to their low abundance. This can lead to variability in results and potential false positives or negatives.



Tumor Heterogeneity

Liquid biopsy samples may not fully represent a tumor's genetic and molecular heterogeneity. Different tumor regions can have distinct genetic profiles; a single blood sample may not capture this diversity.



Sample Quality

Blood samples collected for liquid biopsy can be influenced by sample handling, storage, and transportation factors. Poor sample quality can affect the accuracy and reliability of test results.



Lack of Standardization

The liquid biopsy field is still evolving, and standardized protocols for sample collection, processing, and analysis must be uniformly established. This lack of standardization can lead to variations in results across different laboratories and platforms.

Disadvantages of Liquid Biopsy



Limitations in Types of Biomarkers

Liquid biopsy mainly focuses on DNA, RNA, and protein biomarkers. Some alterations may need to be better represented in these biomarkers, limiting the comprehensive profiling of certain diseases.



Cost

Liquid biopsy tests can be expensive, especially compared to traditional diagnostic methods. The price may limit accessibility for some patients, particularly in resource-limited settings.



Limited Clinical Validation

While liquid biopsy has shown promise, its clinical utility and accuracy for specific applications are still validated through clinical trials and real-world studies. This can lead to uncertainty about its reliability in some cases.



False Positives and Negatives

Due to the inherent complexity of analyzing circulating biomarkers, false-positive and false-negative results can occur, leading to potential misdiagnosis or delayed treatment.



Data Interpretation Complexity

Analyzing the data generated from liquid biopsy tests requires specialized expertise in bioinformatics. Interpretation can be complex, and results may need to be carefully considered in the context of the patient's clinical history.

Disadvantages of Liquid Biopsy



Limited Application for Some Diseases

While liquid biopsy is well-suited for detecting and monitoring cancers, its utility for other medical conditions may be limited due to the specific nature of the biomarkers involved.



Regulatory and Reimbursement Challenges

Regulatory approval and reimbursement coverage for liquid biopsy tests vary by region and country. This can impact patient access to these tests and their integration into clinical practice.



Ethical and Privacy Concerns

Liquid biopsy generates genetic and molecular information that could affect an individual's privacy, insurance coverage, and emotional well-being. Ensuring proper consent and data protection is essential.



Not Always Suitable for All Patients

Liquid biopsy may not be suitable for all patients, such as those with very early-stage cancers or certain medical conditions that do not shed detectable biomarkers into the bloodstream.



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