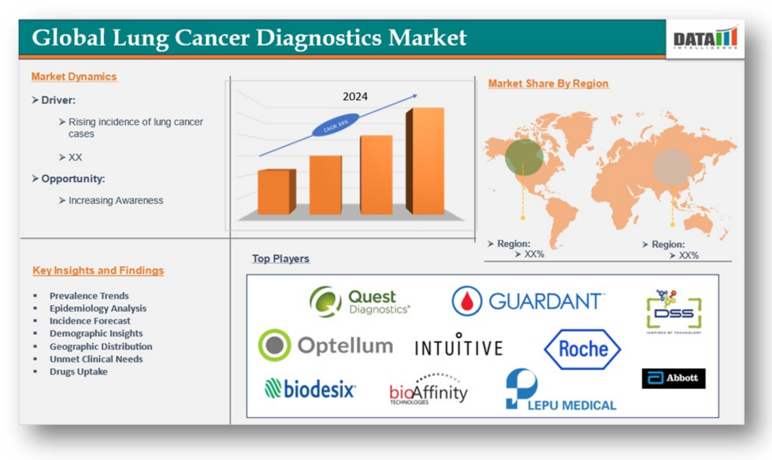
Lung Cancer Diagnostics Market to Hit $8.44 Billion by 2033, Driven by Precision Tools & Liquid Biopsy Advances | DataM

Lung cancer diagnostics market grows steadily, fueled by increasing cancer prevalence, biomarker research, AI integration, and non-invasive screening demand.



Lung Cancer Diagnostics Market

TEXAS, TX, UNITED STATES, July 31, 2025 /EINPresswire.com/ -- The lung cancer diagnostics market covers imaging (CT, PET, X ray), biopsy, cytology, molecular testing, and liquid biopsy technologies. Based on DataM Intelligence analysis, the market reached USD 4.94 billion in 2024 and is projected to grow to USD 8.44 billion by 2033, at a CAGR of approximately 6.18% spanning 2025–2033. Rising global lung cancer incidence, demand for earlier detection, and precision oncology therapies are fueling expansion.

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Lung Cancer Diagnostics Market Segments

By Type (Small Cell Lung Cancer (Small Cell Carcinoma, Combined Small Cell Carcinoma), Non-small Cell Lung Cancer (Adenocarcinoma, Squamous Cell Carcinoma, Large Cell Carcinoma, Others)

By Diagnosis (Imaging Tests, Sputum Cytology, Biopsy, Biomarker Testing, Others)

By End User (Hospitals, Diagnostic Centers, Others)

In Diagnosis Type the Imaging-based diagnostics (low-dose CT, PET, X-ray) currently hold the largest share, forming the backbone of early detection strategies. Biomarker-based and liquid biopsy testing including circulating tumor DNA (ctDNA) and methylation panels are the fastest-growing segment, enabling minimally invasive molecular profiling.

In End Use Facility the Hospitals and clinics dominate usage due to their advanced imaging capabilities and diagnostic teams. However, reference diagnostic laboratories are growing fastest, driven by rising demand for molecular and genomic testing platforms in centralized lab environments.
Key Players & Innovation Leaders in Lung Cancer Diagnostics Market

Top companies shaping lung cancer diagnostics include:

• Thermo Fisher Scientific, Qiagen, Abbott, Bio Rad, Illumina, Neogenomics, bioMérieux, Paige AI, and Biodesix. Quest Diagnostics Incorporated, Lepu Medical Technology (Beijing)Co., Ltd., DSS Imagetec, Guardant Health, Intuitive Surgical, bioAffinity Technologies, Inc., Optellum Ltd and F. Hoffmann-La Roche Ltd. among others.

Noteworthy Innovations:

• Guardant Health’s liquid biopsy platforms (Guardant360, Reveal, Shield) enable ctDNA screening and MRD detection finding relapses months before imaging.
• Biodesix offers proteomic (VeriStrat), ddPCR-based (GeneStrat), and autoantibody nodule classifiers used in NSCLC decision-making workflows.
• Epigenomics AG offers methylation-based lung cancer biomarkers (SHOX2) aiding diagnostic clarity in bronchial samples.

Regional Market Dynamics in Lung Cancer Diagnostics
• North America (largest share): Boasts advanced infrastructure, reimbursement for companion diagnostics, and high uptake of both imaging and molecular tests.
• Europe: Robust adoption of LDCT screening, genetic profiling, and liquid biopsy in Germany, UK, and France. Recent imaging investments are enhancing PET capability.
• Asia-Pacific (fastest-growing): China, India, and Japan are expanding molecular testing and screening programs to meet rising lung cancer rates and urban population growth.
• Latin America: Brazil and Argentina are increasing diagnostic adoption via collaborations with global labs and improving oncology access.
• Middle East & Africa: Emerging investments in diagnostic imaging and genomics particularly in South Africa and GCC countries, aligning with rising medical tourism and public health modernization.

Recent Investments & Strategic Developments in Lung Cancer Diagnostics

United States
• NHS England (not U.S.) rolled out a liquid biopsy blood test for early lung cancer screening in over 2,000 UK patients improving treatment decisions by an average of 16 days and supporting ctDNA-based diagnostics globally.

Europe & Global Collaboration
• Siemens Healthineers acquired Novartis's Advanced Accelerator Applications for over €200M, enhancing its radiopharmaceutical capacity, which supports PET imaging growth used in lung cancer diagnostics and staging across Europe.

Innovation & Market Drivers in Lung Cancer Diagnostics
• Liquid Biopsy & MRD Monitoring: ctDNA assays like Guardant Reveal detect recurrence much earlier than imaging, enabling personalized treatment changes.
• AI in Imaging & Pathology: Tools like Paige AI improve radiographic and histopathologic accuracy; Siemens' AI Rad Companion enhances lung nodule detection by 25–30%.
• NGS and Multi Omics Panels: Platforms like Illumina's TruSight Oncology and Thermo Fisher's Oncomine are enabling mutation-driven treatment targeting and resistance profiling.
• Pharma-Diagnostic Partnerships: Collaborations (e.g., AstraZeneca + Guardant, Qiagen + Roche) co-develop companion diagnostics supporting targeted lung therapies, anchoring long term test adoption.

Lung Cancer Diagnostics Market Challenges & Future Outlook

Challenges:
• High costs limit access to advanced diagnostics in low-income markets.
• Regulatory shifts, such as FDA enforcement of LDT rules, may raise compliance barriers for novel assays.

Future Outlook:

With rising lung cancer incidence and increasing digital diagnostic adoption, the market is projected to grow steadily toward USD 8.44 billion by 2033. Key growth levers include expanded liquid biopsy services, AI-assisted screening, and global partnerships to widen access in Asia, Latin America, and Middle East & Africa.

 Market Volatility & Emerging Risks Analysis
 Competitive Landscape

Have a look at our Subscription Dashboard: https://www.youtube.com/watch?v=x5oEiqEqTWg

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