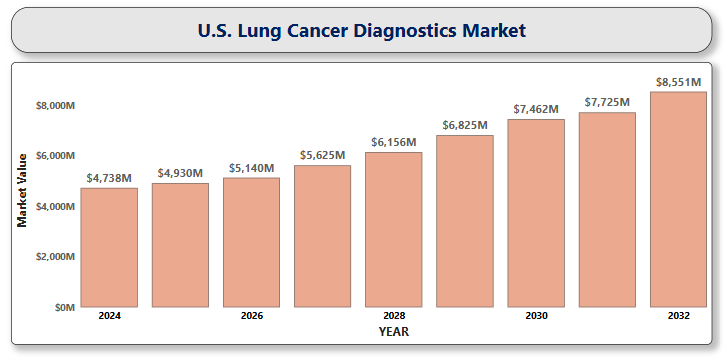
A close-up of hands holding a tablet and a pen

Description automatically generated**U.S. Lung Cancer Diagnostics Market**

According to Intelli, the U.S. Lung Cancer Diagnostics Market size was valued at USD 4,738.05 Million in 2024 and is projected to reach USD 8,551.13 Million by 2032, growing at a CAGR of 8.08 % from 2025 to 2032.



Lung cancer stands as one of the most formidable public health challenges of our time, being both the leading cause of cancer-related deaths globally and one of the most frequently diagnosed malignancies. Lung cancer originates in the tissues of the lungs, typically in the cells lining the air passages. It is broadly classified into two main types: non-small cell lung cancer (NSCLC), which accounts for approximately 85% of cases, and small cell lung cancer (SCLC), a more aggressive form known for its rapid progression and early metastasis. Risk factors for lung cancer are well-documented, with tobacco smoking being the most significant contributor, responsible for over 80% of all cases. However, non-smokers can also develop lung cancer due to exposure to radon gas, air pollution, occupational carcinogens (like asbestos), and genetic predispositions. The insidious nature of lung cancer lies in its ability to remain asymptomatic in early stages. Symptoms such as persistent cough, chest pain, shortness of breath, and unexplained weight loss typically manifest only when the disease has advanced, contributing to late diagnosis and high mortality rates.

Early and accurate diagnosis plays a pivotal role in improving patient outcomes, reducing mortality, and enabling personalized treatment strategies. The field of lung cancer diagnostics has rapidly evolved, integrating advanced technologies, biomarkers, and imaging techniques to facilitate earlier detection, subtype classification, and monitoring of disease progression or recurrence. Traditional diagnostic methods, such as chest X-rays, sputum cytology, and bronchoscopy, have been supplemented, and in many cases, surpassed, by more sensitive and specific modalities like low-dose computed tomography (LDCT), positron emission tomography (PET), and next-generation sequencing (NGS). These innovations have significantly improved early detection rates, particularly in high-risk populations such as smokers and individuals with a family history of lung cancer. Moreover, the rise of liquid biopsies, which analyze circulating tumor DNA (ctDNA) and other biomarkers in blood, has revolutionized non-invasive diagnostic practices.

In parallel, artificial intelligence and machine learning are being integrated into diagnostic workflows, enhancing image interpretation, predicting outcomes, and aiding in clinical A close-up of hands holding a tablet and a pen

Description automatically generateddecision-making. Together, these advancements are transforming lung cancer diagnostics into a more precise, personalized, and proactive domain, one that offers renewed hope in the fight against a disease long associated with late-stage detection and poor prognosis.

**U.S. Lung Cancer Diagnostics Market Definition**

The U.S. Lung Cancer Diagnostics Market Definition refers to the scope and structure of the industry focused on the identification and analysis of lung cancer within the United States. This market comprises a wide array of advanced technologies and services designed to detect, diagnose, and monitor lung cancer at various stages. This market includes imaging modalities such as CT scans, PET scans, and MRIs; molecular diagnostic tools like biomarker and genetic mutation tests (e.g., EGFR, ALK, HER2); and tissue sampling techniques such as biopsies and bronchoscopy.

**U.S. Lung Cancer Diagnostics Market Overview**

The U.S. lung cancer diagnostics market is driven by several key factors contributing to its rapid growth and innovation. One of the primary drivers is the increasing prevalence of lung cancer, particularly among the aging population and individuals with a history of smoking or exposure to environmental carcinogens. Innovations in diagnostic technologies, such as next-generation sequencing, liquid biopsies, and AI-driven imaging, have greatly enhanced the accuracy and timeliness of lung cancer detection, leading to improved patient outcomes. At the same time, the growing emphasis on personalized and precision medicine is accelerating the demand for molecular and biomarker-based testing, allowing for more targeted and effective treatment approaches. Additionally, supportive government initiatives, increased healthcare spending, and growing awareness about the importance of early cancer screening are further propelling market expansion. The integration of diagnostics into routine clinical practice and the development of non-invasive, faster, and more cost-effective diagnostic solutions continue to shape the future of this dynamic market.

**U.S. Lung Cancer Diagnostics Market Segmentation**

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Description automatically generatedThe U.S. Lung Cancer Diagnostics Market Segmentation is typically categorized based on several key criteria that reflect the diversity of diagnostic approaches and patient needs.

**U.S. Lung Cancer Diagnostics Market, By Diagnostic Test**

* **Imaging Tests**
* **Biopsy Procedures**
* **Liquid Biopsy**
* **Molecular Diagnostics**
* **Sputum Cytology**

The U.S. lung cancer diagnostics market, segmented by diagnostic test type, is dominated by imaging tests, which hold the largest market share due to their critical role in the initial detection, staging, and monitoring of lung cancer. Biopsy procedures follow closely, serving as the gold standard for confirming cancer diagnosis through tissue sampling. However, molecular diagnostics are rapidly gaining traction, driven by the shift toward precision medicine and the growing demand for targeted therapies based on genetic profiling. Liquid biopsy, although still emerging, is one of the fastest-growing segments due to its non-invasive nature and ability to detect actionable mutations from blood samples. Sputum cytology, while less commonly used today, remains relevant in specific diagnostic workflows.

**U.S. Lung Cancer Diagnostics Market, By Cancer Type**

* **Non-Small Cell Lung Cancer**
* **Small Cell Lung Cancer**

The U.S. lung cancer diagnostics market, by cancer type, is primarily led by Non-Small Cell Lung Cancer, which accounts for the largest market share due to its higher prevalence. Non-Small Cell Lung Cancer encompasses subtypes such as adenocarcinoma, squamous cell carcinoma, and large cell carcinoma, all of which require distinct diagnostic approaches involving imaging, biopsy, and molecular testing. In contrast, Small Cell Lung Cancer, though less common and more aggressive, is expected to witness steady growth in diagnostic demand owing to its rapid progression and the need for early detection and frequent monitoring.

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**U.S. Lung Cancer Diagnostics Market, By End-User**

* **Hospitals & Clinics**
* **Diagnostic Laboratories**
* **Research Institutes & Academic Centers**

The U.S. lung cancer diagnostics market, segmented by end-user, is primarily driven by hospitals and clinics, which hold the largest market share due to their comprehensive diagnostic capabilities, including imaging tests, biopsy procedures, and molecular diagnostics. Diagnostic laboratories follow closely, becoming increasingly important with the growing demand for specialized testing such as genetic profiling, liquid biopsies, and high-throughput screening. Research institutes and academic centers contribute significantly to market growth by driving innovation in lung cancer diagnostics, developing new technologies, and advancing molecular and genetic testing.

**Key Players**

The “U.S. lung cancer diagnostics market" study report will provide valuable insight emphasizing the U.S. market. The major players in the market Abbott Laboratories, Thermo Fisher Scientific, Roche Diagnostics, Illumina, Medtronic, Philips Healthcare, GE Healthcare, Siemens Healthineers, Becton, Dickinson and Company, F. Hoffmann-La Roche AG, Luminex Corporation, QIAGEN, Neogenomics Laboratories, Hologic, Boditech Med, MedGenome, Myriad Genetics, Oncocyte Corporation among others. Our market analysis also entails a section solely dedicated to such major players wherein our analysts provide an insight into the financial statements of all the major players, along with product benchmarking and SWOT analysis.

**Key Developments**

* In 2024, Median Technologies launched eyonis™ LCS, an AI-powered software designed to improve early lung cancer detection by analyzing low-dose CT scans.
* In 2024, the FDA granted accelerated approval to Tarlatamab-dlle, a bispecific T-cell engager, for small cell lung cancer.

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**Market Attractiveness**

The image of market attractiveness provided further helps to get information about the region leading in the U.S. lung cancer diagnostics market. We cover the major impacting factors driving the industry growth in the given region.

**Porter’s Five Forces**

The image provided would further help to get information about Porter's five forces framework providing a blueprint for understanding the behavior of competitors and a player's strategic positioning in the respective industry. Porter's five forces model can be used to assess the competitive landscape U.S. lung cancer diagnostics market, gauge the attractiveness of a particular sector, and assess investment possibilities.

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