Lung Cancer Screening Market to Soar to $1,853.04 Million by 2031, Growing at 7.7% CAGR

The global market expansion is being fueled by factors, such as increase in use of low-dose computed tomography for lung cancer screening by doctors.

WILMINGTON, DE, UNITED STATES, November 13, 2025 /EINPresswire.com/ -- The global lung cancer screening market is witnessing rapid expansion driven by rising awareness and the growing prevalence of lung cancer worldwide. Valued at $879.6 million in 2021, the market is projected to reach $1,853.04 million by 2031, growing at a CAGR of 7.7% from 2022 to 2031. Lung cancer screening plays a vital role in early disease detection—allowing physicians to identify cancer before symptoms arise and significantly improving the chances of successful treatment outcomes.

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Lung cancer remains one of the deadliest forms of cancer globally, and according to the World Health Organization (WHO), it ranks as the second most common cancer. Early screening, particularly through low-dose computed tomography (LDCT) and X-rays, has proven to be instrumental in detecting cancer in its early stages, when it is still localized and more manageable. Increased awareness among healthcare providers and at-risk populations—such as long-term smokers and older adults—is fueling adoption of screening programs in hospitals, clinics, and diagnostic centers.

The rise in lung cancer cases due to smoking, air pollution, and occupational exposure has emphasized the necessity of routine screening. Governments and non-profit organizations are launching educational and screening initiatives aimed at high-risk populations. In the U.S., the National Lung Screening Trial (NLST) demonstrated that LDCT can reduce mortality by up to 20% among high-risk groups, which is now setting benchmarks globally. Meanwhile, increasing reimbursement coverage and advanced imaging technologies are making screening more accessible and affordable.

Emerging technologies are reshaping the market dynamics. Artificial intelligence (AI) and machine learning (ML) are being increasingly integrated into imaging systems to improve diagnostic accuracy and reduce false positives. AI-driven lung nodule detection software helps radiologists identify subtle abnormalities in LDCT scans with greater precision, ensuring faster

diagnosis and effective treatment planning. Furthermore, the development of non-invasive biomarkers, liquid biopsy tools, and predictive algorithms is revolutionizing the diagnostic landscape.

The ongoing adoption of telehealth and remote diagnostic solutions is also facilitating better reach to underserved regions. Mobile screening units and AI-enabled cloud-based imaging platforms are bridging gaps in rural healthcare infrastructure, enabling earlier detection even in remote populations. Moreover, collaborations between diagnostic companies, research organizations, and public health institutions are enhancing the standardization of screening protocols globally.

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Regionally, North America dominates the lung cancer screening market owing to a robust healthcare infrastructure, supportive government initiatives, and a strong presence of advanced imaging equipment manufacturers. Europe follows closely, driven by national cancer screening programs, public-private partnerships, and research advancements in digital diagnostics. The Asia-Pacific region is poised for the fastest growth through 2031, fueled by increasing tobacco consumption, urban air pollution, and rapidly improving healthcare access across China, India, Japan, and Australia.

Key players shaping the competitive landscape include Siemens Healthineers, GE Healthcare, Koninklijke Philips N.V., Canon Medical Systems Corporation, Fujifilm Holdings, and Hitachi Ltd. These companies are investing heavily in AI-integrated imaging technologies, compact LDCT systems, and software for workflow automation. Strategic collaborations with hospitals and diagnostic centers for large-scale screening campaigns are further amplifying their market presence.

Despite technological advances, the market faces challenges such as false positives, radiation exposure concerns, and limited screening awareness in low-income regions. However, increasing adoption of low-radiation CT systems, integration of AI-powered image analytics, and strong government focus on cancer prevention are expected to offset these restraints. As healthcare ecosystems evolve toward precision medicine, the global lung cancer screening market is poised for sustained growth through innovation, accessibility, and early diagnosis.

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