AI in Oncology Market: Trends, Growth, Opportunities & Future Outlook 2025 | DataM Intelligence

The Global AI in Oncology Market is expected to reach at a CAGR of 25.3% during the forecast period 2025-2033.

AUSTIN, TX, UNITED STATES, May 26, 2025 /EINPresswire.com/ -- The Global AI in Oncology Market is poised for significant growth, projected to expand from $2.43 billion in 2024 to $22.85 billion by 2033, reflecting a robust Compound Annual Growth Rate of 25.3% during the forecast period.

Market Overview:

AI in Oncology Market

The use of AI into oncology is transforming cancer care by improving diagnostic accuracy, personalizing treatment programs, and expediting drug discovery procedures. The rising incidence of cancer, combined with advances in AI technologies, is boosting the adoption of AI solutions in oncology. Healthcare practitioners and pharmaceutical businesses use AI to enhance patient outcomes and streamline clinical operations.

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The AI in Oncology Market is rapidly growing, driven by advances in machine learning, improved diagnostics, personalized treatment, and rising cancer prevalence globally."

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Market Drivers and Opportunities:

Advancements in AI and Machine Learning: Continuous improvements in AI algorithms and machine learning models are enabling more accurate cancer diagnostics and personalized treatment strategies.

Rising Cancer Incidence: The global increase in cancer cases necessitates efficient diagnostic and treatment solutions, propelling the demand for AI in oncology.

Collaborations and Partnerships: Strategic alliances between tech firms and healthcare providers are fostering innovation. For instance, in September 2024, Immunai Inc. partnered with AstraZeneca to utilize Immunai's AI platform for enhancing clinical decision-making and drug development.

Focus on Personalized Medicine: AI enables the analysis of individual patient data, facilitating tailored treatment plans that improve efficacy and reduce adverse effects.

Market Segmentation:

By Component Type:
Software
Hardware
Services.

By Cancer Type:
Breast Cancer
Lung Cancer
Prostate Cancer
Skin Cancer
Others.

By Application:
Cancer Detection
Drug Discovery
Drug Development
Others.

By End User:
Hospitals
Pharmaceutical Companies
Research Institutes
Others.

By Region:
North America
Europe
South America
Asia Pacific
Middle East and Africa.

Geographical Market Share:

North America: Dominates the market with a 43% revenue share in 2024, attributed to advanced healthcare infrastructure, supportive regulatory policies, and significant investments in AI technologies.

Asia-Pacific: Exhibits rapid growth due to increasing cancer prevalence, technological advancements, and supportive government initiatives in countries like Japan and India.

Europe: Shows steady growth with substantial investments in AI research and development, particularly in countries like the UK and Germany.

Key Market Players:

Azra AI
CureMetrix, Inc.
ConcertAI
Immunai
MVision AI Inc.
Paige AI, Inc.
Mindpeak GmbH
Imagene AI Ltd.
Predictive Oncology
Tempus

Recent Developments:
United States
In February 2025, Tempus AI partnered with Imagene to develop an AI-powered biomarker prediction panel for non-small cell lung cancer, aiming to enhance diagnostic accuracy and personalize treatment.

In April 2025, the University of Pittsburgh partnered with Leidos on a $10 million program to use AI to tackle cancer and health inequities, with an emphasis on marginalized communities.

Japan
In August 2023, BostonGene, NEC Corporation, and Japan Industrial Partners established BostonGene Japan, Inc., a joint venture aimed at advancing AI applications in oncology within the Japanese market.

NEC Corporation continues to invest in AI technologies for healthcare, focusing on developing solutions that enhance cancer diagnostics and treatment planning.

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Conclusion:

The AI in Oncology market is experiencing unprecedented growth, driven by technological advancements, strategic collaborations, and a global emphasis on personalized medicine. As AI continues to transform cancer care, stakeholders across the healthcare spectrum are poised to benefit from improved patient outcomes and operational efficiencies.

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