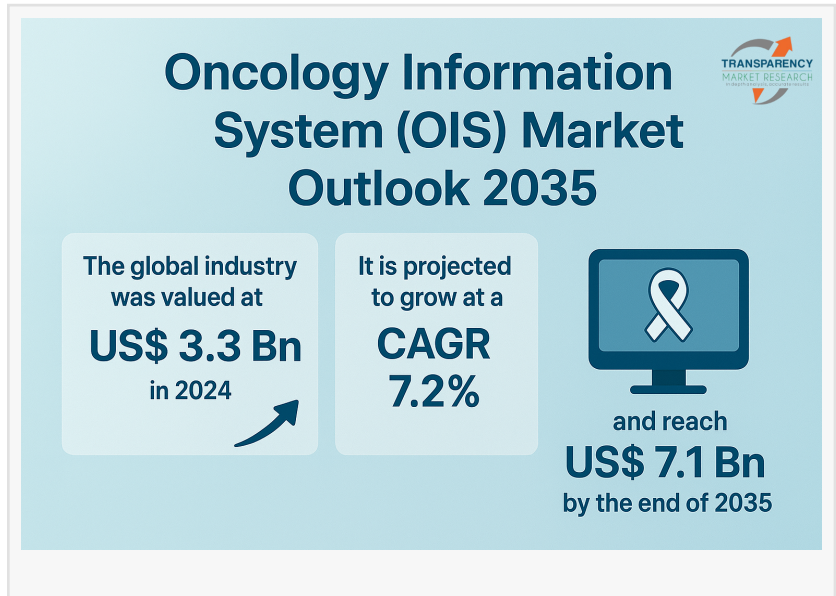


Oncology Information System Market to Reach USD 7.1 Billion by 2035, Growing at 7.2% CAGR from USD 3.3 Billion in 2024

Oncology Information System Market to reach US\$ 7.1 Bn by 2035, growing at 7.2% CAGR, driven by rising cancer cases and adoption of advanced health IT.

WILMINGTON, DE, UNITED STATES, September 2, 2025 /EINPresswire.com/ -- The global [oncology information system \(OIS\) market](https://www.transparencymarketresearch.com/sample/sample.php?flag=S&rep_id=18659) is undergoing rapid transformation, propelled by the rising global burden of cancer, increasing need for precision medicine, and advancements in healthcare IT infrastructure. Valued at US\$ 3.3 billion in 2024, the market is projected to expand at a compound annual growth rate (CAGR) of 7.2% between 2025 and 2035, ultimately reaching US\$ 7.1 billion by 2035.



The increasing complexity of oncology treatment regimens—spanning radiotherapy, chemotherapy, immunotherapy, and precision-targeted drug delivery—has created the need for integrated platforms that consolidate patient data, streamline workflows, and assist in decision-making. Oncology information systems (OIS) have emerged as vital solutions, enabling healthcare providers to manage patient information efficiently, track outcomes, and enhance clinical precision across oncology domains.

As healthcare shifts toward value-based care and personalized medicine, OIS adoption is accelerating globally. Integration with electronic health records (EHRs), imaging systems, molecular profiling data, and AI-driven analytics is reshaping the way cancer treatment is delivered, monitored, and optimized.

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Analysts' Viewpoint on Oncology Information System Market Scenario

Industry analysts highlight that the demand for oncology information systems is being fueled by multiple converging factors:

Rising cancer prevalence – With more than 20 million new cancer cases and 9.7 million cancer-related deaths reported globally in 2022, the urgency for efficient data and treatment management has never been greater.

Shift to personalized oncology – Precision oncology requires systems capable of integrating genomic, molecular, and patient-specific data. OIS platforms enable oncologists to tailor treatments with higher accuracy, thereby improving clinical outcomes.

AI and cloud adoption – The integration of artificial intelligence (AI), machine learning (ML), and cloud-based solutions into OIS platforms is unlocking advanced predictive analytics, decision support, and remote monitoring capabilities.

Regional market dynamics – North America leads the global OIS market due to robust IT infrastructure and early adoption, while Asia-Pacific represents the fastest-growing region, driven by healthcare digitization initiatives.

Overall, the analysts' consensus is that OIS will evolve from being primarily data management tools into AI-powered, interoperable ecosystems that support holistic cancer care across diagnostics, treatment, follow-up, and survivorship.

Market Dynamics

Key Drivers

Rising Global Cancer Burden

The exponential rise in cancer prevalence is a major catalyst for OIS market expansion. Conventional paper-based systems and outdated software are insufficient for handling the growing patient load and complex treatment workflows. OIS platforms ensure accuracy in chemotherapy cycles, radiation therapy planning, and immunotherapy management.

For example, a leading cancer center in India deployed OIS to handle its rising breast and cervical cancer cases, achieving a 30% improvement in treatment compliance and patient satisfaction through automation of schedules and real-time monitoring of adverse events.

Shift Toward Precision Oncology and AI-Driven Treatment

The move toward genomic-driven cancer therapy requires advanced OIS platforms that can integrate molecular profiling and apply AI analytics for personalized treatment planning.

In Germany, an AI-enhanced OIS was introduced to manage non-small cell lung cancer patients, enabling oncologists to tailor therapies based on genomic data and treatment history. This

improved outcomes and accelerated treatment initiation.

Growing Adoption of Cloud-Based and Interoperable Systems

Healthcare providers increasingly favor cloud-delivered OIS solutions due to scalability, cost-effectiveness, and remote accessibility. Interoperability with imaging, laboratory, and radiology systems ensures seamless communication and better coordination among oncology departments.

Challenges and Restraints

Despite promising growth, the OIS market faces certain challenges:

High implementation costs: Advanced OIS software and infrastructure require significant investment, posing challenges for smaller hospitals and cancer centers in low-income regions.

Data privacy and security concerns: As OIS systems collect sensitive genomic and medical data, healthcare providers face stringent compliance requirements for cybersecurity and patient confidentiality.

Integration challenges: Many legacy systems are incompatible with modern OIS, making full-scale integration complex and resource-intensive.

Opportunities

AI-based decision support: Leveraging AI for predictive modeling of treatment responses and risk stratification offers immense potential.

Tele-oncology and remote patient monitoring: Post-pandemic, the demand for telehealth-enabled OIS platforms has surged, allowing oncologists to monitor patients in real time.

Expansion in emerging markets: Countries in Asia-Pacific, Latin America, and the Middle East are rapidly digitizing healthcare, presenting vast untapped opportunities for OIS adoption.

Market Segmentation

By Solution

Software (dominant segment): Includes patient information systems, electronic medical records (EMR), laboratory information systems (LIS), radiology information systems (RIS), treatment planning systems, and decision support software. Software dominated the market in 2024 due to its role in streamlining workflows, enabling AI integration, and improving care coordination.

Services: Encompass implementation, maintenance, training, and support services. As hospitals adopt OIS on larger scales, demand for services is increasing steadily.

By Application

Medical Oncology
Radiation Oncology

Surgical Oncology

Medical oncology currently holds the largest share due to its reliance on structured treatment cycles and drug protocols, but radiation oncology is expected to witness rapid adoption given the need for highly precise treatment planning.

By End-User

Hospitals & Ambulatory Surgical Centers (largest segment)

Diagnostic & Imaging Centers

Ablation & Cancer Care Centers

Research Facilities

Hospitals dominate due to their central role in cancer care delivery, while research facilities represent a growing niche segment as precision oncology and clinical trials expand.

By Region

North America (leading region) – Holds the largest market share due to strong healthcare IT infrastructure, early adoption of AI, and government support for precision oncology.

Europe – Strong focus on automation and integrated care models; regulatory frameworks and greenfield projects support OIS expansion.

Asia-Pacific (fastest-growing region) – Rapid digitization of healthcare, increasing cancer prevalence, and government investment in smart hospitals drive growth.

Latin America, Middle East & Africa – Growth driven by modernization initiatives, but adoption is slower due to infrastructure gaps.

Competitive Landscape

The OIS market is moderately consolidated, with major players investing in AI-driven platforms, cloud-based solutions, and global expansion strategies. Key companies include:

Varian Medical Systems (Siemens Healthineers)

Elekta

Philips Healthcare

Cerner (Oracle)

Epic Systems Corporation

McKesson

Flatiron Health

Siemens Healthineers

RaySearch Laboratories

Accuray Incorporated

BrainLab

Key Strategic Moves

August 2021: Siemens Healthineers acquired Varian Medical Systems to build an integrated oncology ecosystem.

June 2021: Philips partnered with Elekta to co-develop precision oncology solutions.

2025: Market leaders are increasingly embedding AI-driven clinical decision support and real-time analytics into their OIS platforms.

Future Outlook

The future of oncology information systems lies in their evolution into AI-powered, cloud-integrated, interoperable platforms capable of addressing the growing complexity of cancer care. Key trends to watch by 2035 include:

Mainstream AI integration for predictive analytics, automated treatment recommendations, and clinical trial matching.

Expansion of tele-oncology for remote cancer care delivery, especially in rural and underserved regions.

Molecular and genomic data integration into OIS platforms, supporting next-generation precision oncology.

Wider adoption in emerging economies, as governments and healthcare providers increase investment in digital health infrastructure.

Patient-centric care models, where OIS platforms enable patients to access their treatment plans, reports, and outcomes seamlessly.

By 2035, the OIS market is projected to become indispensable in global oncology workflows, playing a central role in the digital transformation of cancer care.

The oncology information system (OIS) market is at the forefront of digital health innovation. With cancer incidence rising globally and treatment modalities becoming increasingly complex, OIS platforms are no longer optional—they are essential tools for precision, efficiency, and improved patient outcomes.

Driven by AI integration, cloud adoption, and precision oncology initiatives, the industry is set to expand robustly, nearly doubling in value from US\$ 3.3 billion in 2024 to US\$ 7.1 billion by 2035.

The future of OIS will be defined by interoperability, patient-centricity, and predictive intelligence, marking a paradigm shift in how cancer care is delivered across the globe.

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