

Image-Guided Radiation Therapy Market Outlook 2025-2034: Market Share, and Growth Analysis By Product Type (4D Gating And 4D RT, Linear Accelerator (LINAC), PET And MRI Guided Radiation Therapy, Portal Imaging, CT Scanning), By Procedure (Intensity-Modulation Radiation Therapy, 3D Conformal Radiation Therapy, Stereotactic Therapy, Proton Beam Therapy, Particle Therapy), By Application, By End User

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Abstracts

The Image-Guided Radiation Therapy Market is valued at USD 2.4 billion in 2025 and is projected to grow at a CAGR of 5.8% to reach USD 4 billion by 2034. The Image-Guided Radiation Therapy (IGRT) Market is a key segment of modern oncology, offering enhanced precision in cancer treatment by integrating real-time imaging with radiation delivery systems. IGRT allows oncologists to accurately target tumors while minimizing radiation exposure to surrounding healthy tissue. Techniques include CT, MRI, ultrasound, and X-ray imaging combined with linear accelerators to track tumor position and movement during treatment. This is especially crucial in treating tumors in areas prone to shifting, such as the lungs, liver, and prostate. The rising global cancer burden, demand for minimally invasive therapies, and improvements in radiotherapy technologies are driving the adoption of IGRT in hospitals, cancer centers, and academic institutions worldwide. The IGRT market experienced significant advancements in integration, automation, and accuracy. Leading manufacturers introduced next-generation linear accelerators with built-in cone-beam CT and adaptive radiotherapy features. AI algorithms were increasingly used to automate tumor contouring and optimize treatment plans. Proton therapy centers also adopted IGRT

tools for real-time dose delivery management. Healthcare providers expanded the use of IGRT in pediatric and head-and-neck cancers due to its ability to spare healthy tissues. Emerging economies like Brazil, India, and South Africa showed notable growth in IGRT adoption as governments upgraded cancer care infrastructure and introduced reimbursement models for advanced radiotherapy. Collaborations between imaging equipment companies and oncology software firms further boosted technology integration and patient outcomes. The IGRT market is expected to evolve toward more personalized, AI-driven radiotherapy systems. Adaptive radiotherapy will become standard practice, using daily imaging to adjust treatment in response to anatomical changes. Integration of MRI-guided systems will grow, allowing for non-ionizing imaging during radiation delivery. Cloud-based data sharing and treatment planning will enhance multidisciplinary care coordination, particularly in remote or underserved regions. As patient-centric care becomes a priority, IGRT platforms will focus on reducing treatment time, improving comfort, and minimizing long-term side effects. Continued investment in cancer research and precision medicine will reinforce IGRT as a cornerstone of next-generation oncology treatment, particularly in complex and high-risk cases.

Key Insights Image-Guided Radiation Therapy Market

Integration of AI with IGRT is automating treatment planning and tumor localization, reducing clinician workload and enhancing accuracy.

Adaptive radiotherapy using daily imaging is becoming increasingly common for tailoring treatment based on patient-specific anatomical changes.

MRI-guided IGRT is gaining traction for its non-ionizing imaging capabilities and soft tissue clarity during radiation delivery.

Expansion of IGRT into pediatric oncology and sensitive anatomical sites is improving therapeutic outcomes with fewer side effects.

Collaborative platforms between radiotherapy vendors and cloud providers are enabling remote planning and global access to advanced cancer care.

Rising global cancer incidence is increasing demand for precise and effective radiotherapy solutions like IGRT.

Technological advancements in linear accelerators, imaging systems, and

software are enhancing IGRT system performance and outcomes.

Growing awareness of patient safety and the need to minimize radiation exposure is fueling IGRT adoption in complex cases.

Government initiatives and healthcare infrastructure investments are expanding access to advanced radiotherapy in emerging markets.

High equipment costs and operational complexity limit IGRT accessibility in low-resource healthcare settings and rural hospitals.

Lack of trained radiation oncology professionals and insufficient reimbursement frameworks hinder widespread implementation of IGRT globally.

Image-Guided Radiation Therapy Market Segmentation

By Product Type

4D Gating And 4D RT

Linear Accelerator (LINAC)

PET And MRI Guided Radiation Therapy

Portal Imaging

CT Scanning

By Procedure

Intensity-Modulation Radiation Therapy

3D Conformal Radiation Therapy

Stereotactic Therapy

Proton Beam Therapy

Particle Therapy

By Application

Lung Cancer

Prostate Cancer

Head And Neck Cancer

Gynecological Cancer

Gastrointestinal Cancer

Other Applications

By End User

Hospitals

Independent Radiotherapy Centers

Key Companies Analysed

Hitachi Ltd.

Toshiba Corporation

Siemens Healthcare GmbH

Koninklijke Philips N.V.

GE Healthcare Company

Varian Medical Systems Inc.

Elekta AB

Canon Medical Systems R&D (Dalian) Co. Ltd.

Accuray Incorporated

Ion Beam Applications S.A.

Brainlab AG

ViewRay Technologies Inc.

Mevion Medical Systems Inc.

RaySearch Laboratories AB

Vision RT Ltd.

Sun Nuclear Corporation

IZI Medical Products LLC

Eckert & Ziegler BEBIG GmbH

C-RAD AB

Standard Imaging Inc.

CIVCO Radiotherapy Inc.

IntraOp Medical Corporation

RTsafe Solutions Ltd.

ASG Superconductors S.p.A.

Mirada Medical Corporation

Xstrahl Ltd.

Mobius Medical Systems LP

Precision X-Ray Inc.

RefleXion Medical Inc.

Panacea Medical Technologies Pvt. Ltd.

Image-Guided Radiation Therapy Market Analytics

The report employs rigorous tools, including Porter's Five Forces, value chain mapping, and scenario-based modeling, to assess supply–demand dynamics. Cross-sector influences from parent, derived, and substitute markets are evaluated to identify risks and opportunities. Trade and pricing analytics provide an up-to-date view of international flows, including leading exporters, importers, and regional price trends.

Macroeconomic indicators, policy frameworks such as carbon pricing and energy security strategies, and evolving consumer behavior are considered in forecasting scenarios. Recent deal flows, partnerships, and technology innovations are incorporated to assess their impact on future market performance.

Image-Guided Radiation Therapy Market Competitive Intelligence

The competitive landscape is mapped through OG Analysis' proprietary frameworks, profiling leading companies with details on business models, product portfolios, financial performance, and strategic initiatives. Key developments such as mergers & acquisitions, technology collaborations, investment inflows, and regional expansions are analyzed for their competitive impact. The report also identifies emerging players and innovative startups contributing to market disruption.

Regional insights highlight the most promising investment destinations, regulatory landscapes, and evolving partnerships across energy and industrial corridors.

Countries Covered

North America — Image-Guided Radiation Therapy market data and outlook to

2034

United States

Canada

Mexico

Europe — Image-Guided Radiation Therapy market data and outlook to 2034

Germany

United Kingdom

France

Italy

Spain

BeNeLux

Russia

Sweden

Asia-Pacific — Image-Guided Radiation Therapy market data and outlook to 2034

China

Japan

India

South Korea

Australia

Indonesia

Malaysia

Vietnam

Middle East and Africa — Image-Guided Radiation Therapy market data and outlook to 2034

Saudi Arabia

South Africa

Iran

UAE

Egypt

South and Central America — Image-Guided Radiation Therapy market data and outlook to 2034

Brazil

Argentina

Chile

Peru

** We can include data and analysis of additional countries on demand.*

Research Methodology

This study combines primary inputs from industry experts across the Image-Guided Radiation Therapy value chain with secondary data from associations, government publications, trade databases, and company disclosures. Proprietary modeling techniques, including data triangulation, statistical correlation, and scenario planning,

Image-Guided Radiation Therapy Market Outlook 2025-2034: Market Share, and Growth Analysis By Product Type (4D...

are applied to deliver reliable market sizing and forecasting.

Key Questions Addressed

What is the current and forecast market size of the Image-Guided Radiation Therapy industry at global, regional, and country levels?

Which types, applications, and technologies present the highest growth potential?

How are supply chains adapting to geopolitical and economic shocks?

What role do policy frameworks, trade flows, and sustainability targets play in shaping demand?

Who are the leading players, and how are their strategies evolving in the face of global uncertainty?

Which regional “hotspots” and customer segments will outpace the market, and what go-to-market and partnership models best support entry and expansion?

Where are the most investable opportunities—across technology roadmaps, sustainability-linked innovation, and M&A—and what is the best segment to invest over the next 3–5 years?

Your Key Takeaways from the Image-Guided Radiation Therapy Market Report

Global Image-Guided Radiation Therapy market size and growth projections (CAGR), 2024-2034

Impact of Russia-Ukraine, Israel-Palestine, and Hamas conflicts on Image-Guided Radiation Therapy trade, costs, and supply chains

Image-Guided Radiation Therapy market size, share, and outlook across 5 regions and 27 countries, 2023-2034

Image-Guided Radiation Therapy market size, CAGR, and market share of key products, applications, and end-user verticals, 2023-2034

Short- and long-term Image-Guided Radiation Therapy market trends, drivers, restraints, and opportunities

Porter's Five Forces analysis, technological developments, and Image-Guided Radiation Therapy supply chain analysis

Image-Guided Radiation Therapy trade analysis, Image-Guided Radiation Therapy market price analysis, and Image-Guided Radiation Therapy supply/demand dynamics

Profiles of 5 leading companies—overview, key strategies, financials, and products

Latest Image-Guided Radiation Therapy market news and developments

Additional Support

With the purchase of this report, you will receive

An updated PDF report and an MS Excel data workbook containing all market tables and figures for easy analysis.

7-day post-sale analyst support for clarifications and in-scope supplementary data, ensuring the deliverable aligns precisely with your requirements.

Complimentary report update to incorporate the latest available data and the impact of recent market developments.

** The updated report will be delivered within 3 working days*

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