+357 96 030922
info@marketpublishers.com

Robotic Radiotherapy Market Size, Share & Trends Analysis Report By Product (Radiotherapy Systems, Software, 3D Cameras), By Technology (CyberKnife, Gamma Knife, Particle Therapy), By Application, By End Use, By Region, And Segment Forecasts, 2025 - 2033

https://marketpublishers.com/r/R782F92AC96FEN.html
Date: November 2025
Pages: 120
Price: US$ 5,950.00 (Single User License)
ID: R782F92AC96FEN

Abstracts

The global robotic radiotherapy market size was valued at USD 1.37 billion in 2024 and is projected to reach USD 3.30 billion by 2033, growing at a CAGR of 10.36% from 2025 to 2033. The industry is primarily driven by the rising prevalence of cancer worldwide, the growing demand for highly precise and minimally invasive treatment options, advancements in image-guided and robot-assisted radiotherapy technologies and increasing adoption of personalized medicine approaches.

The healthcare infrastructure expansion in emerging markets, favorable reimbursement policies in developed regions, and the ability of robotic systems to reduce treatment times and improve patient outcomes further accelerate market growth.

The increasing prevalence of cancer cases is a key factor driving the market's growth. According to the WHO article published in February 2024, Global cancer cases are projected to exceed 35 million by 2050, representing a 77% increase from the 20 million cases reported in 2022. This sharp rise fuels the need for exact and efficient treatment options, driving stronger adoption of robotic radiotherapy systems. With growing patient volumes and increasing treatment complexity, robotic platforms are becoming essential due to their accuracy, automation, and ability to minimize damage to healthy tissues.

According to the American Cancer Society, in collaboration with IARC, there were about

20?million new cancer diagnoses in 2022 and 9.7?million cancer-related deaths. These data highlight the enormous and growing demand for healthcare systems globally. This escalating cancer burden fuels the adoption of robotic radiotherapy, as such platforms offer high-precision, minimally invasive treatments that can spare healthy tissue, reduce toxicity, and support efficient, automated workflows.

The increasing adoption of incision-free oncology treatment platforms is driving growth in the robotic radiotherapy market. For example, in August 2024, Apollo Cancer Centre in Bengaluru adopted the CyberKnife S7 FIM platform, reflecting the growing shift toward robotics-enabled radiosurgery capable of treating tumors across multiple regions of the body without incisions. Similarly, Tampa General Hospital introduced its upgraded CyberKnife S7 system in January 2024, highlighting the move toward outpatient-friendly radiation therapy delivered in significantly fewer sessions. These developments demonstrate how healthcare providers are prioritizing advanced robotic systems to enhance treatment accuracy, reduce session times, and improve patient convenience. The ability to deliver highly focused radiation in just a few outpatient visits allows patients to return home the same day or next, reinforcing the demand for precise, minimally invasive therapies that streamline oncology workflows.

Several developed markets are adopting supportive reimbursement policies for advanced radiotherapy. For instance, in the US, insurance coverage increasingly includes AI-driven robotic and stereotactic radiotherapy procedures. Policy incentives promote outpatient, precise cancer therapies, encouraging hospitals to invest in these high-tech platforms. Recent updates in states such as Arizona (effective August 2025) include reimbursement rules emphasizing radiation therapy management and dosimetry services critical to adaptive therapy, supporting advanced treatment adoption. These incentives help accelerate robotic radiotherapy penetration at oncologic centers by offsetting technology costs and encouraging precision care.

The industry has attracted significant investment, reflecting strong confidence in AI-powered, adaptive, and patient-centric treatment technologies. Funding is driving innovation in real-time imaging, adaptive treatment planning, and robotic delivery, enabling improved tumor targeting, workflow efficiency, and minimally invasive, outpatient-friendly therapies. Overall, this investment activity underscores growing investor confidence in technologies that enhance clinical outcomes and accelerate the adoption of advanced robotic radiotherapy worldwide.

Global Robotic Radiotherapy Market Report Segmentation

This report forecasts revenue growth at global, regional, and country levels and analyzes industry trends in each sub-segment from 2021 to 2033. For this study, Grand View Research, Inc. has segmented the global robotic radiotherapy market report based on product, technology, application, end use, and region:

Product Outlook (Revenue, USD Million, 2021 - 2033)

Radiotherapy Systems

Software

3D Cameras (Surface-Guided)

Others

Technology Outlook (Revenue, USD Million, 2021 - 2033)

Linear Accelerators

Conventional Linear Accelerators

MRI - Linear Accelerators

Stereotactic Radiation Therapy Systems

CyberKnife

Gamma Knife

Particle Therapy

Proton Beam Therapy

Heavy Ion Beam Therapy

Application Outlook (Revenue, USD Million, 2021 - 2033)

Prostate Cancer

+357 96 030922
info@marketpublishers.com

Breast Cancer

Lung Cancer

Head & Neck Cancer

Colorectal Cancer

Other Cancers

End Use Outlook (Revenue, USD Million, 2021 - 2033)

Hospitals

Independent Radiotherapy Centers

Regional Outlook (Revenue, USD Million, 2021 - 2033)

North America

- U.S.
- Canada
- Mexico

Europe

- Germany
- UK
- Spain
- Italy
- France
- Denmark

+357 96 030922
info@marketpublishers.com

- Norway
- Sweden

Asia Pacific

- Japan
- China
- India
- Australia
- Thailand
- South Korea

Latin America

- Brazil
- Argentina

MEA

- South Africa
- Saudi Arabia
- UAE
- Kuwait

+357 96 030922
info@marketpublishers.com

Contents

5.1. Definition and Scope
5.2. Technology Market Share Analysis, 2024 & 2033
5.3. Segment Dashboard
5.4. Global Robotic Radiotherapy Market, by Technology, 2021 to 2033
5.5. Linear Accelerators
  5.5.1. Linear accelerators market estimates and forecasts, 2021 to 2033 (USD Million)
5.6. Conventional Linear Accelerators
  5.6.1. Conventional linear accelerators market estimates and forecasts, 2021 to 2033 (USD Million)
5.7. MRI - Linear Accelerators
  5.7.1. MRI - linear accelerators market estimates and forecasts, 2021 to 2033 (USD Million)
5.8. Stereotactic Radiation Therapy Systems
  5.8.1. Stereotactic radiation therapy systems market estimates and forecasts, 2021 to 2033 (USD Million)
5.9. CyberKnife
  5.9.1. CyberKnife market estimates and forecasts, 2021 to 2033 (USD Million)
5.10. Gamma Knife
  5.10.1. Gamma knife market estimates and forecasts, 2021 to 2033 (USD Million)
5.11. Particle Therapy
  5.11.1. Particle therapy market estimates and forecasts, 2021 to 2033 (USD Million)
5.12. Proton Beam Therapy
  5.12.1. Proton beam therapy market estimates and forecasts, 2021 to 2033 (USD Million)
5.13. Heavy Ion Beam Therapy
  5.13.1. Heavy ion beam therapy market estimates and forecasts, 2021 to 2033 (USD Million)

CHAPTER 6. ROBOTIC RADIOTHERAPY MARKET SEGMENT ANALYSIS, BY APPLICATION, 2021 - 2033 (USD MILLION)

6.1. Definition and Scope
6.2. Application Market Share Analysis, 2024 & 2033
6.3. Segment Dashboard
6.4. Global Robotic Radiotherapy Market, by Application, 2021 to 2033
6.5. Prostate Cancer
  6.5.1. Prostate cancer market estimates and forecasts, 2021 to 2033 (USD Million)
6.6. Breast Cancer

+357 96 030922
info@marketpublishers.com

CHAPTER 9. COMPETITIVE LANDSCAPE

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

List Of Tables

LIST OF TABLES

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

List Of Figures

LIST OF FIGURES

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

I would like to order

Product name: Robotic Radiotherapy Market Size, Share & Trends Analysis Report By Product (Radiotherapy Systems, Software, 3D Cameras), By Technology (CyberKnife, Gamma Knife, Particle Therapy), By Application, By End Use, By Region, And Segment Forecasts, 2025 - 2033

Product link: https://marketpublishers.com/r/R782F92AC96FEN.html

Price: US$ 5,950.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:
info@marketpublishers.com

Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page https://marketpublishers.com/r/R782F92AC96FEN.html