

## **Brachytherapy Treatment Planning Systems Market - Growth, Trends, Covid-19 Impact, and Forecasts (2023 - 2028)**

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### **Report description:**

The Brachytherapy Treatment Planning Systems Market is projected to register a CAGR of 9.30% during the forecast period (2022-2027).

During the pandemic, radiation oncology departments across the country implemented strict guidelines, including temperature checks for patients and staff members, prescreening for COVID-19 symptoms before each patient visit, social distancing in the waiting room, limiting visitors, providing surgical masks to patients, and personal protective equipment for staff members, as part of their respective hospitals' initiatives. As per the study published in January 2021, by Advances in Radiation Oncology, titled "The Impact of COVID-19 on Brachytherapy During the Pandemic: A Rutgers-Robert Wood Johnson Barnabas Health Multisite Experience, six patients elected to undergo external beam radiation therapy (EBRT) followed by a brachytherapy boost for unfavorable intermediate- and high-risk diseases. Since elective surgeries were canceled within our system during the pandemic, 4 patients were treated with EBRT with or without androgen deprivation therapy (ADT) only. Despite the challenges, the health care system faced during the pandemic, most patients with cancer were safely treated with minor treatment delays and interruptions. Thus, due to the COVID-19 imposed restrictions, the was significantly impacted. However, with the increase in cardiac surgeries, the demand for brachytherapy treatment planning systems is expected to boost the growth of the market.

The increasing prevalence of cancerous disorders is expected to drive the market. The increasing cancer burden is one of the major factors driving the market. According to the International Agency for Research on Cancer (IARC), the global incidence of cancer in 2020 was estimated to be around 19.3 million. This is expected to increase to 24.6 million by the year 2030. Furthermore, breast cancer is among the most common cancer, with around 2.26 million new cases in 2020. Moreover, according to the Globocan 2020 estimates, in 2020, there were approximately 19.3 million cancer cases detected across the globe and some of the most common cancers detected were prostate cancer (7.3%), breast cancer (11.7%), colorectal cancer (10.0%), and lung

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cancer (11.4%). Further estimates predict a sharp increase of 47% in the caseload in 2040 as compared to 2020. According to the Globocan estimates, there would be 28.4 million new cancer cases diagnosed in 2040 across the globe. With the advent of breakthrough technologies capable of dramatically impacting the industry, the radiation therapy sector is constantly evolving and progressing. The industry is expected to have profitable growth in the next years because of improving healthcare infrastructure and rising healthcare spending.

Furthermore, key participants are focusing on growth opportunities in emerging economies with the development of healthcare infrastructure and growing digital healthcare literacy. Furthermore, favorable government initiatives and the promotion of public-private partnerships in cancer care and radiation therapy will boost product innovation and development. For instance, the Australian government launched Victorian Cancer Plan 2020-2024 to improve cancer care strategies and cancer outcomes through early detection and timely treatment. In 2019, Barwon Health Foundation collaborated with Varian Medical Systems to inaugurate Andrew Love Cancer Center Chemotherapy Day Ward and Oncology Pharmacy to improve the accessibility of brachytherapy treatment planning solutions. Additionally, in September 2020, the company announced the launch of a new linear accelerator called Elekta Harmony in the market.

However, shortage of healthcare personnel in information technology and radiology sector and cybersecurity and privacy concerns are expected to hinder the market growth during the forecast period.

### Brachytherapy Treatment Planning Systems Market Trends

#### The Auto-Contouring Software Segment is Expected to Witness Growth Over the Forecast Period

To analyze the discrepancies between several datasets, automated contouring software is routinely utilized. However, no universally recognized contouring approach has been publicly advocated. Image-guided radiation therapy-IGRT technologies are utilized to simplify the complex procedures involved in radiotherapy multimodality for better and more understandable results.

The growing popularity of radiation operations is driving the development of automated contouring radiotherapy software. According to the National Institutes of Health updates from October 2020, radiotherapy alone delivers a 5-year survival benefit in 2.4 % of all cancer patients, and when paired with chemotherapy, this number rises to 0.3 %. Every year, the number of cancer sufferers worldwide increases. Automated contouring radiotherapy software is entirely reliant on the type of radiotherapy equipment used, and with the rising incidence of oncological patients, demand for automated contouring radiotherapy software is on the rise.

The constant product innovations, approvals, and certifications from governing bodies will drive the segment. For instance, in July 2020, MIM Software Inc.'s Contour ProgeAI received the United States Food and Drug Administration clearance.

Additionally, increased government financing for sophisticated medical treatment research with a focus on patient safety is likely to support the global market's revenue growth. Because of expanding healthcare concerns and changing government laws aimed at reducing treatment errors, automated contouring radiotherapy software for radiation devices has a high penetration rate, making it easier and more efficient to assess oncological situations.

#### North America is Expected to Hold a Significant Share in the Market and Expected to do Same in the Forecast Period

Because of the fast developing healthcare infrastructure and rising healthcare spending, North America dominated the global market and accounted for the biggest revenue share. The rising cancer rates combined with an aging population is expected to drive the market. According to the American Cancer Society updates from January 2022, 1.9 million new cancer cases will be diagnosed, and 609,360 cancer deaths will occur in the United States in 2022. In 2021, about 1.9 million new cancer cases were

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expected to be diagnosed in the United States, and in 2020, about 1.8 million new cancer cases were diagnosed. In North America, these factors are driving the desire for innovative technological solutions in cancer care. The expansion of the regional market is being driven by the availability of suitable healthcare and cancer care facilities, as well as an increase in the number of cancer research institutes. Another element driving the market growth is the availability of a favorable reimbursement framework.

In North America, the growing number of product advancements in the cancer care market is assisting in the reduction of cancer-related mortality. The healthcare industry is evolving, and digital literacy is increasing in various nations, promoting market growth.

Moreover, in the United States, breast cancer is one of the leading cancer types. According to the January 2022 update by the Breastcancer.org, about 1 in 8 United States women (about 13%) will develop invasive breast cancer over the course of her lifetime. The same source reports that in 2022, an estimated 287,850 new cases of invasive breast cancer are expected to be diagnosed in women in the United States, along with 51,400 new cases of non-invasive (in situ) breast cancer.

The market is developing in tandem with the rising prevalence of cancer and the growing number of radiation institutes with technology for improved brachytherapy treatment planning. The number of well-developed and technologically advanced radiotherapy centers has increased in recent years. Because of the availability of better radiotherapy centers, public-private partnerships for the establishment of better facilities, and strategic collaborations of major players with radiotherapy centers for providing technologically advanced machines with enhanced treatment planning and delivery software & tools, brachytherapy treatment planning, and patient care management is becoming more popular. The global market is being driven by the increased prevalence of cancer, technical improvements, and the advantages offered by intraoperative radiotherapy over conventional radiation. The expanding number of clinical trials investigating the use of intraoperative radiation for various cancer applications is likely to provide market participants with lucrative growth prospects.

#### Brachytherapy Treatment Planning Systems Market Competitor Analysis

The Brachytherapy Treatment Planning Systems Market is fragmented and competitive and consists of several major players. In terms of market share, a few of the major players are currently dominating the market. Some of the companies which are currently dominating the market are Elekta AB, Varian Medical Systems, MIM Software, RaySearch Laboratories, Prowess Inc., ALCEN, Theragenics Corporation, Eckert & Ziegler BEBIG, Sensus Healthcare Inc., IsoRay, Inc., IsoAid, C4 Imaging, and Concore Oncology.

Additional Benefits:

- <ul> <li> The market estimate (ME) sheet in Excel format </li>
- <li> 3 months of analyst support </li> </ul>

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