

Cancer Vaccines Market - Growth, Trends, Covid-19 Impact, and Forecasts (2023 - 2028)

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Report description:

The cancer vaccines market had a revenue of USD 6,784.25 million in the base year, and it is expected to register a CAGR of 11.54% during the forecast period.

The COVID-19 pandemic had an adverse effect on the global economy and healthcare system. Pharmaceuticals, medical gadgets, and biotechnological items were all affected by the worldwide lockdown. Research and development, on the other hand, took center stage. Many countries stopped their asymptomatic cancer screening programs due to the need to divert medical personnel and resources to the pandemic response. In March 2020, the governments of Wales and Scotland stopped funding breast, cervical, and bowel cancer screening programs. The Centers for Medicare & Medicaid Services in the United States encouraged healthcare institutions to delay screenings because they were a low-priority service. Several clinical experiments were put on hold due to COVID-19, at least during the pandemic's peak. Apart from the potential health benefits for those currently enrolled in studies, a phase 3 cancer clinical study typically costs at least USD 20 million. As a result, the production of cancer vaccines and other current clinical trials was suspended throughout the pandemic, and it is predicted that the market suffered as a result.

On the other hand, according to a JCO Global Oncology Journal article published in October 2021, the Dubai Health Authority reviewed and adjusted all center-specific guidelines and policies for each center-specific cohort to maintain high-quality oncology care throughout the nation. Other quality requirements included preventing interruptions of IV chemotherapy services, increasing the use of granulocyte colony-stimulating factor support, and providing coverage for antibiotics. The expansion of the industry is also being fueled by such government initiatives. Therefore, the market first witnessed a short-term negative impact due to the shift in research focus toward the development of COVID-19 vaccines. However, the relaxation of strict regulations during the post-pandemic period is expected to contribute to the growth of the market.

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Certain factors driving the growth of the cancer vaccine market include the increasing number of cancer cases, rising investments and government funding in developing cancer vaccines, and technological developments in cancer vaccines. As per the International Agency for Research on Cancer's published GLOBOCAN 2020 report, which estimated the incidence and mortality of 36 cancers in 185 countries globally, there were an estimated 19,292,789 new cases of cancer diagnosed in 2020, and about 9,958,133 people died due to cancer all over the world. From the total number of diagnosed cancer cases, 10,065,305 cases were reported in males and 9,227,484 cases were reported in females. The incidence of cancer cases in males was expected to reach 15,585,096 by 2040 and 13,302,846 in females by 2040. Such an increasing incidence of cancer among the global population is expected to drive the growth of the market. Similarly, as per the data published by the European Cancer Information System in 2020, the estimated incidence of non-melanoma skin cancer in 2020 was 2,681,958 and was expected to be 3,244,076 by 2040. Such an increasing incidence of cancer in various countries is expected to drive the demand for cancer vaccines, which is expected to propel market growth over the forecast period.

Cancer vaccines play a vital role in the maintenance of the immune system, as they are considered to be biological response modifiers. These cancer vaccines target the infectious agents that may cause cancer through the production of antibodies. Moreover, as the number of cancer cases increases, the development of new cancer vaccines is also increasing for the treatment and prevention of the disease. For instance, in March 2021, eTheRNA, a Belgian-based immunotherapy company, received a USD 6.87 million grant from the European Commission to accelerate the clinical development of mRNA-based vaccines for cervical cancers. Furthermore, in November 2020, Moderna Inc. released interim data from the expansion cohort of its ongoing Phase 1 study of its mRNA personalized cancer vaccine (PCV), mRNA-4157, in combination with Merck's Keytruda, and results demonstrated that the vaccine candidate is well tolerated at all dose levels and produced responses as measured by tumor shrinkage in HPV-negative head and neck squamous cell carcinoma (HNSCC) patients.

However, the stringent regulatory issues, along with longer timelines in manufacturing vaccines and the availability of alternative therapies such as immunotherapy, act as major hindering factors in the cancer vaccine market's growth.

Cancer Vaccines Market Trends

Recombinant Cancer Vaccines are Expected to Hold Significant Market Share in the Cancer Vaccines Market

Recombinant cancer vaccines are expected to hold a significant share of the market during the forecast period owing to the rising demand for effective and innovative cancer vaccines and rising technological advancements. Recombinant vaccines are made by using yeast or bacteria to mass-produce a single viral or bacterial protein in vast amounts. The patient's immune system then produces antibodies to the disease agent's protein, protecting the patient from natural disease. Over the forecast period, it is anticipated that the increasing research and development studies in the sector would accelerate the studied segment's growth. According to the Frontiers article, in January 2022, intravenously administered therapeutic HSV-1 vaccination with VC2-OVA significantly decreased the colonization of tumor cells in the mice's lungs. Additionally, VC2-OVA increased mouse longevity and triggered a powerful preventive antitumor response, resulting in beneficial outcomes from the recombinant HSV-1 vaccination vector. Similarly, according to an NCBI study published in November 2021, recombinant EGF-CRM197 is a novel combined conjugate therapeutic cancer vaccine that is safe and well tolerated in patients with advanced solid tumors. This finding supports the further clinical development of the vaccine.

According to an NCBI study published in January 2021, the pBI-11 DNA vaccine may be used with the tissue-antigen HPV vaccine (TA-HPV) in a heterologous prime-boost strategy to enhance. Therefore, this study suggests that the recombinant DNA vaccine is effective in preventing cervical cancer brought on by the HPV virus, which has contributed to the market's rapid expansion. Therefore, the expansion of the market sector is projected to be aided by the growing research and development efforts demonstrating the effectiveness of recombinant cancer vaccines.

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North America is Expected to Dominate the Market Over the Forecast Period

North America is expected to grow due to the high prevalence of cancer and the developed healthcare infrastructure in the region. The United States has a better healthcare infrastructure than most developed countries. According to the American Cancer Society report in 2020, the national spending on cancer care was USD 200.7 billion in 2020.

Also, the increasing prevalence of cancer in this region is expected to drive the demand for effective cancer vaccines, thereby contributing to the growth of the market. For instance, according to the American Cancer Society's report in 2022 over 1.9 million new cancer cases are expected to be diagnosed in the United States in 2022. and additionally, 80% of the people diagnosed with cancer in the United States are 55 years of age or older and 57% are 65 or older. Thus, due to the high prevalence of cancer, and the highly affected geriatric population, the demand for effective therapeutics is also high in the country which is expected to drive the growth in the studied market in the United States.

Furthermore, product launches, alliances, and mergers and acquisitions are expected to contribute to the growth of the market in North America. For instance, in December 2020, the United States Food and Drug Administration accepted Anixa Biosciences' Investigational New Drug (IND) application for their breast cancer vaccine funded by the United States Department of Defense. Although Triple Negative Breast Cancer is the primary target, this technology may also be able to stop other types of breast cancer in the future. Results showed that the vaccine candidate is well tolerated at all dose levels and produced responses as measured. Thus, the abovementioned factors are expected to increase market growth over the forecast period in this region.

Cancer Vaccines Market Competitor Analysis

The cancer vaccine market is consolidated and consists of a few major players. Market players are adopting different growth strategies to enhance their market presence, such as partnerships, agreements, collaborations, mergers, and acquisitions. Companies, like AstraZeneca PLC, Bristol-Myers Squibb, GlaxoSmithKline, Roche, and Merck & Co. Inc., OSE Immunotherapeutics, Sanofi, and Moderna, among others, hold substantial shares in the cancer vaccine market.

Additional Benefits:

- The market estimate (ME) sheet in Excel format
- 3 months of analyst support

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