

Global Personalized Cancer Vaccine Market Opportunity & Clinical Trials Outlook 2025 Report Highlights & Findings

<https://marketpublishers.com/r/G81B082EF3E6EN.html>

Date: March 2025

Pages: 130

Price: US\$ 3,300.00 (Single User License)

ID: G81B082EF3E6EN

Abstracts

Please note: extra shipping charges are applied when purchasing Hard Copy License depending on the location.

Global Personalized Cancer Vaccine Market Opportunity & Clinical Trials Outlook 2025
Report Highlights & Findings:

Commercially Approved Personalized Cancer Vaccine: Provenge

Provenge Patent , Price & Dosage Insight

Global Clinical Research Trends By Region & Indication

Insight On More Than 18 Personalized Cancer Vaccines In Clinical Trials

Personalized Cancer Vaccines Clinical Insight By Developer, Indication & Phase

Insight On Key Personalized Cancer Vaccines Proprietary Development
Platforms

Competitive Landscape

Personalized cancer vaccines are emerging as a transformative force in next generation cancer treatment methodology, with emergent commercial potential fueled by advancements in biotechnology and an increasing demand for targeted therapies. These vaccines represent a tailored approach to cancer treatment, utilizing a patient's

unique genetic makeup to craft vaccines that specifically target and eliminate cancer cells. The success of this approach is gaining traction, and the market for personalized cancer vaccines is expected to grow significantly by 2030. Companies like BioNTech, Moderna, and smaller players such as myNEO Therapeutics are at the forefront, using their expertise in mRNA technology, which was initially honed during the COVID-19 pandemic.

The rise of personalized cancer vaccines is largely driven by the precision medicine revolution, which tailors treatments to individual patient characteristics. These vaccines offer several advantages over traditional therapies, including greater specificity and efficacy. BioNTech, for example, has gained attention for its work on personalized mRNA cancer vaccines, particularly through its collaboration with pharmaceutical giant Genentech to target pancreatic cancer. This partnership has led to the development of autogene cevumeran, which is based on BioNTech's iNeST technology platform. Autogene cevumeran is currently being tested in clinical trials for pancreatic ductal adenocarcinoma, melanoma, and colorectal cancer. The collaboration demonstrates the potential of combining advanced mRNA technology with personalized treatments to address cancers that have historically been difficult to treat.

Investment in personalized cancer vaccines is also soaring, with venture capital firms and pharmaceutical companies pouring significant funds into startups and partnerships. The collaboration between Merck and Moderna, for example, has already demonstrated promising results, contributing to the growing optimism around the future of cancer vaccines. However, despite the excitement surrounding the technology, challenges remain—particularly in manufacturing. Since personalized cancer vaccines are bespoke treatments tailored to each individual, production costs can exceed \$100,000 per patient. This high cost is one of the major hurdles that could limit the widespread adoption of these vaccines in the near term.

The good news is that ongoing advancements in automation technologies, including AI-driven neoantigen selection and robotic vaccine synthesis, are expected to reduce production costs over time. These innovations will help streamline vaccine development and make the treatment more accessible to a broader patient population. Furthermore, as economies of scale come into play, the cost of production is likely to decrease, helping to make personalized cancer vaccines more cost-effective in the long term.

Despite the aforementioned challenges, personalized cancer vaccines are anticipated to become a cornerstone of oncology treatment portfolios in the coming years. The increasing availability of companion diagnostics will help refine patient selection,

ensuring that those most likely to benefit from these vaccines receive them. This could potentially redefine how cancers are treated, shifting from a one-size-fits-all model to one that is personalized, precise, and more effective.

In conclusion, the commercial ecosystem surrounding personalized cancer vaccines is evolving rapidly, with significant opportunities for innovation and profitability. The promise of these vaccines to revolutionize cancer treatment is clear, but successful navigation of the complexities of manufacturing, intellectual property, and reimbursement will be key to realizing their full potential. As technology continues to advance and the field matures, personalized cancer vaccines could become a standard treatment option, offering hope for patients worldwide and reshaping the future of cancer care.

Contents

1. PERSONALIZED CANCER VACCINES AS NEXT GENERATION IMMUNOTHERAPEUTIC APPROACH

- 1.1 Approach To Cancer Vaccine Strategy
- 1.2 Cancer Vaccines - Current Progress & Challenges

2. PERSONALIZED CANCER VACCINE MECHANISM OF ACTION

- 2.1 Role of Tumor Neoantigens & Human Leukocyte Antigen
- 2.2 Personalized Cancer Vaccine Working Mechanism
- 2.3 Genetic Polymorphism In Pharmacogenomics
- 2.4 Cancer Pharmacogenomics & Somatic Mutations

3. ROLE OF BIOMARKERS IN PERSONALIZED VACCINES

- 3.1 Pharmacogenomic Biomarkers
- 3.2 Prognostic & Predictive Biomarkers

4. PROVENGE – 1ST APPROVED PERSONALIZED CANCER VACCINE

- 4.1 Overview & Patent Insight
- 4.2 Pricing & Dosing Insight

5. PERSONALIZED CANCER VACCINES CLINICAL INSIGHT BY DEVELOPER, INDICATION & PHASE

6. CURRENT CLINICAL DEVELOPMENT & FUTURE COMMERCIALIZATION OUTLOOK

- 6.1 Current Market Development Scenario
- 6.2 Future Market Outlook

7. PERSONALIZED CANCER VACCINES CLINICAL TRENDS & DEVELOPMENTS INSIGHT BY INDICATION

- 7.1 Melanoma
- 7.2 Lung Cancer

- 7.3 Breast Cancer
- 7.4 Prostate Cancer
- 7.5 Gastrointestinal Cancers
- 7.6 Gynecological Cancers
- 7.7 Brain Tumor
- 7.8 Hematological Malignancies

8. PERSONALIZED CANCER VACCINES CLINICAL & MARKET INSIGHT BY REGION

- 8.1 US
- 8.2 EU
- 8.3 China
- 8.4 India
- 8.5 Australia
- 8.6 South Korea
- 8.7 Taiwan
- 8.8 UK

9. PERSONALIZED CANCER VACCINES PROPRIETARY DEVELOPMENT PLATFORMS

- 9.1 BioNTech - iNeST
- 9.2 BioVaxys - DPX & Haptenix Platforms
- 9.3 CureVac - proprietary mRNA technology
- 9.4 Evaxion – PIONEER & ObsERV Technologies
- 9.5 Geneos - GT-EPIC™ platform
- 9.6 Moderna - mRNA Design Studio
- 9.7 myNEO Therapeutics - ImmunoEngine
- 9.8 Nouscom - Unnamed Technology
- 9.9 Nykode Therapeutics – Vaccibody
- 9.10 Transgene - myvac

10. PERSONALIZED CANCER VACCINE MARKET DYNAMICS

- 10.1 Market Drivers & Opportunities
- 10.2 Market Challenges & Restraints

11. COMPETITIVE LANDSCAPE

11.1 BioNtech AG

11.2 CureVac AG

11.3 Evaxion Biotech

11.4 Geneos Therapeutics

11.5 Genentech

11.6 Merck

11.7 Moderna Therapeutics

11.8 NeoCura

11.9 Transgene

11.10 TuHURA Biosciences

Figure 1-1: Cancer Vaccine Types

Figure 1-2: Advantages Of Targeting Neoantigens In Cancer Vaccine Development

Figure 2-1: Personalized Cancer Vaccine - Mechanism

Figure 2-2: Demonstrating Genomic Polymorphism In Pharmacogenomics

Figure 2-3: Source of Pharmacological & Pharmacogenetic Variability

Figure 3-1: Biomarkers In Personalized Medicine

Figure 3-2: Roadmap For Developing Predictive Biomarkers

Figure 4-1: Provenge – Approval Year By Region

Figure 4-2: Provenge – Cost Per Unit & Supply (US\$), March'2025

Figure 6-1: Global Personalized Cancer Vaccines Market - Future Outlook

Figure 7-1: KEYNOTE-942 Phase 2 Study (NCT03897881) – Initiation & Completion Year

Figure 7-2: BNT111-01 Phase 2 Study (NCT04526899) – Initiation & Completion Year

Figure 7-3: KEYNOTE-D36 Phase 2 Study (NCT05309421) – Initiation & Completion Year

Figure 7-4: MC210102 Phase 1 Study (NCT05269381) – Initiation & Completion Year

Figure 7-5: INTerpath-002 Phase 3 Study (NCT06077760) – Initiation & Completion Year

Figure 7-6: INTerpath-009 Phase 3 Study (NCT06623422) – Initiation & Completion Year

Figure 7-7: KEYNOTE-603 Phase 1 Study (NCT03313778) – Initiation & Completion Year

Figure 7-8: MCC-20915 Phase 2 Study (NCT05325632) – Initiation & Completion Year

Figure 7-9: FK-PC101-01 Phase 2 Study (NCT06636682) – Initiation & Completion Year

Figure 7-10: 19-039 Phase 1 Study (NCT04161755) – Initiation & Completion Year

Figure 7-11: IMCODE003 Phase 2 Study (NCT05968326) – Initiation & Completion Year

Figure 7-12: GT-30 Phase 1/2 Study (NCT04251117) – Initiation & Completion Year

Figure 7-13: QUILT 502 Phase 1/2 Study (NCT06253494) – Initiation & Completion Year

Figure 9-1: BioNTech - iNeST

Figure 9-2: BioVaxys - DPX & Haptenix Platforms

Figure 9-3: CureVac - proprietary mRNA technology

Figure 9-4: Evaxion –Proprietary Technologies

Figure 9-5: Geneos - GT-EPIC Platform

Figure 9-6: Moderna - mRNA Design Studio Features

Figure 9-7: myNEO Therapeutics - ImmunoEngine

Figure 9-8: Nouscom - Unnamed Technology

Figure 9-9: Nykode Therapeutics – Vaccibody Structure

Figure 9-10: Nykode Therapeutics – Vaccibody Mechanism Of Action

Figure 9-11: Transgene - myvac Platform

Figure 10-1: Global Personalized Cancer Vaccines Market - Drivers & Opportunities

Figure 10-2: Global Personalized Cancer Vaccines Market - Challenges & Restraints

Table 5-1: Personalized Cancer Vaccines By Developer, Indication & Phase

Table 7-1: Melanoma - Personalized Vaccines In Clinical Trials

Table 7-2: Lung Cancer - Personalized Vaccines In Clinical Trials

Table 7-3: Breast Cancer - Personalized Vaccines In Clinical Trials

Table 7-4: Prostate Cancer - Personalized Vaccines In Clinical Trials

Table 7-5: Gastrointestinal Cancer - Personalized Vaccines In Clinical Trials

Table 7-6: Gynecological Cancer - Personalized Vaccines In Clinical Trials

Table 7-7: Brain Cancer - Personalized Vaccines In Clinical Trials

Table 7-8: Hematological Malignancies - Personalized Vaccines In Clinical Trials

I would like to order

Product name: Global Personalized Cancer Vaccine Market Opportunity & Clinical Trials Outlook 2025 Report Highlights & Findings

Product link: <https://marketpublishers.com/r/G81B082EF3E6EN.html>

Price: US\$ 3,300.00 (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/G81B082EF3E6EN.html>