

# Global CAR T Cell Therapy Market & Clinical Trials Insight 2028

https://marketpublishers.com/r/GD85161F70CEN.html

Date: May 2022

Pages: 720

Price: US\$ 3,000.00 (Single User License)

ID: GD85161F70CEN

## **Abstracts**

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

Global CAR T Cell Therapy Market & Clinical Trials Insight 2028 Report Highlights:

Research Methodology

Global CAR T Cell Therapy Market Opportunity > USD 15 Billion

Global & Regional Market Insight: Current & Market Forecast 2028

Approved CAR T Cell Therapies Sales Forecast Till 2028

Emerging In Vivo Induced CAR T Cell Therapies

CAR T Cell Therapy Manufacturing Cost Analysis

CAR T Cell Therapy Approval & Reimbursement Scenario By Country

Patent, Price, Sales Insight On 6 Approved CAR T Cell Therapies

Insight On More Than 600 CAR T Cell Therapies In Clinical Trials

CAR T Cell Therapies Clinical Trials Insights by Company, Country & Phase

Chimeric antigen receptor (CAR) T cell therapy is novel immunotherapeutic approach



which is indicated for the management of cancer. CAR T-cell therapy is a type of therapy in which the T-cells are taken from the blood of the patient, which is then modified in a lab by the addition of a gene for a man-made receptor (chimeric antigen receptor). This aids in better recognizing of specific cancer cell antigens. The CAR T-cells are then given back to the patient. To date, 6 CAR T-cell therapy products including Kymriah (tisagenlecleucel), yescarta (axicabtagene), Tecartus (brexucabtagene autoleucel), Breyanzi (lisocabtagene maraleucel), Carvykti (ciltacabtagene autoleucel), and Abecma (idecabtagene vicleucel) have been approved by FDA for the management of wide range of cancers. In addition to this, Relmacabtagene autoleucel have been approved in China.

The introduction of CAR T cell therapies have shown high adoption rates in short span of time has propelled the further research and development activities in this domain. Apart from hematological malignancies, the researchers are also expanding the role of CAR T cell therapies in solid tumors which will propel the growth of market. For instance, a recent research study demonstrated that infusing immune cells into patients has shown early promise by shrinking tumors in digestive system. The interim results demonstrated that tumors in nearly 50% of the 37 patients so far reduced in size after the therapy.

The global CAR T cell therapy market is highly consolidated with several key players. The pharmaceutical giants in the market are increasingly partnering or collaborating with technologies companies to integrate advanced technologies for the betterment of CAR-T therapy or to expand geographical presence. For instance, Bayer and Atara Biotherapeutics entered into worldwide license agreement for the development of next generation ATA3271 which is mesothelin-directed CAR-T cell therapy. The agreement also aims to develop ATA2271, for the management of high mesothelin-expressing tumors such as malignant pleural mesothelioma and non-small-cell lung cancer.

Among drug type, Yescarta is currently dominating the market. Yescarta (axicabtagene ciloleucel) is a CD19-directed genetically modified autologous T cell immunotherapy indicated for the treatment of adult patients with relapsed or refractory large B-cell lymphoma after two or more lines of systemic therapy, including diffuse large B-cell lymphoma. Recently in 2022, regulatory bodies expanded the approval of drug for the management of large B-cell lymphoma (LBCL) that is refractory to first-line chemoimmunotherapy or relapses within a year of first-line chemotherapy. The wide range of therapeutic indications as well as global availability of the drug is the major factors which are the major factors aiding in dominance of these factors.



As per our report findings, the Global CAR T cell therapy market opportunity is expected to surpass US\$ 15 Billion by 2028. The development of CAR T cell therapy will gather momentum from the increasing number of investors, designers, and analysts in the guide therapy. Rising frequencies of cancer across the globe together with the relentless technological advancement for dependable and effective cancer treatment is expected to support growth of the worldwide CAR-T cell therapy market. Furthermore, heavy investments on clinical research and development in cell therapy are estimated to boost the market for CAR-T cell therapy in the years to come.

Our report provides information on the globally approved CAR T cell therapies along with their price, dosage, and sales analysis. The report analyzes and forecasts the size of the global CAR-T cell therapy market. The report delivers a full-scale exploration of market dynamics and factors that are manipulating the growth of the global CAR-T cell therapy market. The report also gives competitive analysis of major market players will give a competitive advantage to customers in their respective businesses.



#### **Contents**

- 1. RESEARCH METHODOLOGY
- 2. CHIMERIC ANTIGEN RECEPTOR (CAR) T CELL THERAPY NEXT ERA IN IMMUNO ONCOLOGY
- 3. EVOLUTION OF CHIMERIC ANTIGEN RECEPTOR (CAR) T-CELL DESIGN
- 3.1 Structure of CAR-T Cell
- 3.2 1st Generation Chimeric Antigen Receptor
- 3.3 2nd & 3nd Generation CAR-T Cell
- 3.4 Principle of Chimeric Antigen Receptor Design
- 4. APPROACHES TO IMPROVE THE EFFICACY OF CAR-T CELL THERAPY
- 5. CAR T CELL THERAPY MANUFACTURING COST ANALYSIS
- 6. EMERGING IN-VIVO INDUCED CAR T CELL THERAPIES
- 6.1 Need of In-Vivo CAR T Cell Therapy
- 6.2 In-Vivo CAR T Cell Platform; VivoVec, TumorTag, & RACR/CAR
- 6.3 Key Drug in Research & Development
- 7. GLOBAL CAR T CELL THERAPY MARKET OULOOK 2022 2028
- 7.1 Market Overview
- 7.2 Future Market Opportunity
- 8. GLOBALLY APPROVED CAR T CELL THERAPIES PRICING, DOSAGE & SALES ANALYSIS 2028
- 8.1 Tisagenlecleucel (Kymriah)
- 8.2 Axicabtagene Ciloleuce (Yescarta)
- 8.3 Brexucabtagene Autoleucel (Tecartus)
- 8.4 Lisocabtagene maraleucel (Breyanzi)
- 8.5 Idecabtagene Vicleucel (Abecma)
- 8.6 Relmacabtagene autoleucel (Carteyva)
- 8.7 Ciltacabtagene autoleucel (Carvykti)



#### 9. US CAR T CELL THERAPY MARKET OUTLOOK

- 9.1 Approved & Key CAR T Cell Therapy Products in US
- 9.2 Market Overview
- 9.3 Current Reimbursement Scenario

#### 10. EUROPE CAR T CELL THERAPY MARKET OUTLOOK

- 10.1 Approved & Key CAR T Cell Therapy Products in Europe
- 10.2 UK
- 10.3 Germany
- 10.4 Spain
- 10.5 France
- 10.6 Rest of Europe
- 10.7 Current Reimbursement Scenario

#### 11. CHINA CAR T CELL THERAPY MARKET OUTLOOK

- 11.1 Approved & Key CAR T Cell Therapy Products in China
- 11.2 Current Market Size & Forecast

#### 12. JAPAN CAR T CELL THERAPY MARKET OUTLOOK

- 12.1 Approved & Key CAR T Cell Therapy Products in Japan
- 12.2 Market Overview
- 12.3 Current Reimbursement Scenario

#### 13. SOUTH KOREA CAR T CELL THERAPY MARKET OUTLOOK

- 13.1 Approved & Key CAR T Cell Therapies in South Korea
- 13.2 Future Market Opportunity

#### 14. AUSTRALIA CAR T CELL THERAPY MARKET OUTLOOK

- 14.1 Approved & Key CAR T Cell Products in Australia
- 14.2 Australia CAR T Cell Therapy Market
- 14.3 Current Reimbursement Scenario



#### 15. TAIWAN CAR T CELL THERAPY MARKET OUTLOOK

#### 16. GLOBAL CAR T CELLS CLINICAL PIPELINE OVERVIEW

- 16.1 By Company
- 16.2 By County
- 16.3 By Indication
- 16.4 By Phase

# 17. GLOBAL CAR T CELLS CLINICAL PIPELINE BY COMPANY, INDICATION & PHASE

- 17.1 Research
- 17.2 Preclinical
- 17.3 Clinical
- 17.4 Phase-I
- 17.5 Phase-I/II
- 17.6 Phase-II
- 17.7 Phase-III
- 17.8 Registered

#### 18. MARKETED CAR T CELL THERAPY CLINICAL INSIGHT

- 18.1 Breyanzi
- 18.2 CARVYKTI
- 18.3 Yescarta
- 18.4 Kymriah
- 18.5 Abecma
- 18.6 Tecartus

#### 19. GLOBAL CAR-T CELL THERAPY MARKET DYNAMICS

- 19.1 Favorable Parameters
- 19.2 Market Challenges

#### 20. COMPETITIVE LANDSCAPE

- 20.1 Autolus
- 20.2 Bellicum



- 20.3 Bluebird
- 20.4 Celgene
- 20.5 Cellectis
- 20.6 Celyad
- 20.7 Eureka Therapeutics
- 20.8 Fortress Biotech
- 20.9 Immune Therapeutics
- 20.10 Juno Therapeutics
- 20.11 Kite Pharma
- 20.12 Novartis
- 20.13 Sorrento therapeutics
- 20.14 TILT Biotherapeutics
- 20.15 Ziopharm



# **List Of Figures**

#### LIST OF FIGURES

Figure 2-1: Historical Development of CAR-T Cell There	Figure 2-1:	Historical	Develop	ment of	CAR-T	Cell	Therap	٧
--	-------------	------------	---------	---------	-------	------	--------	---

- Figure 3-1: Structure of Chimeric Antigen Receptor
- Figure 3-2: First Generation Chimeric Antigen Receptor
- Figure 3-3: Second Generation Chimeric Antigen Receptor
- Figure 3-4: Third Generation Chimeric Antigen Receptor
- Figure 3-5: Targeting Mechanism of Chimeric Antigen Receptor T-Cell
- Figure 3-6: Signalling Mechanism of Chimeric Antigen Receptor T-Cell
- Figure 4-1: Strategies to Improve CAR T Cell Therapy
- Figure 5-1: Flowchart for Manufacturing CAR T Cells
- Figure 5-2: CAR T Cell Annual Fixed Costs (US\$)
- Figure 5-3: CAR T Cell Annual Fixed Costs (%)
- Figure 5-4: CAR T Cell Variable Cost Per Production (US\$)
- Figure 5-5: CAR T Cell Variable Cost Per Production (%)
- Figure 7-1: Global Cancer Incidences & Deaths (Million), 2020
- Figure 7-2: Global CAR T Cell Therapy Market by Product (US\$ Million), 2021
- Figure 7-3: Global CAR T Cell Therapy Market by Product (%), 2021
- Figure 7-4: Global CAR T Cell Therapy Market by Product (US\$ Million), 2020
- Figure 7-5: Global CAR T Cell Therapy Market by Product (%), 2020
- Figure 7-6: Global CAR T Cell Therapy Market by Region (%), 2021
- Figure 7-7: Global CAR T Cell Therapy Market Size (US\$ Billion), 2022 2028
- Figure 8-1: US Kymriah FDA Approval by Indication
- Figure 8-2: Europe Kymriah EMA Approval by Indication
- Figure 8-3: Kymriah Approval & Patent Exclusivity Year by Region
- Figure 8-4: UK Per Unit Price of Kymriah Infusion Bag (GBP/US\$), May'2022
- Figure 8-5: Kymriah Per Unit Price of Intravenous Suspension by Region (US\$), May'2022
- Figure 8-6: Global Kymriah Annual Sales (US\$ Million), 2019 2021
- Figure 8-7: Global Kymriah Quarterly Sales (US\$ Million), 2021
- Figure 8-8: Global Kymriah Quarterly Sales (US\$ Million), 2020
- Figure 8-9: Global Kymriah Sales Forecast Value (US\$ Million), 2022 2028
- Figure 8-10: US Yescarta FDA Approval by Indication
- Figure 8-11: Yescarta Approval Year by Region
- Figure 8-12: US Yescarta FDA Approval & Patent Expiration Year
- Figure 8-13: UK Per Unit Price of Yescarta Infusion Bag (GBP/US\$), May'2022
- Figure 8-14: Yescarta Per Unit Price of Intravenous Suspension by Region (US\$),



#### May'2022

- Figure 8-15: Yescarta Global Sales by Region (US\$ Million), Q1'2022
- Figure 8-16: Yescarta Global Sales by Region (%), Q1'2022
- Figure 8-17: Global Yescarta Annual Sales (US\$ Million), 2018 2021
- Figure 8-18: US Yescarta Annual Sales (US\$ Million), 2018 2021
- Figure 8-19: Yescarta Global Sales by Region (US\$ Million), 2021
- Figure 8-20: Yescarta Global Sales by Region (%), 2021
- Figure 8-21: Global Yescarta Quarterly Sales (US\$ Million), 2021
- Figure 8-22: US Yescarta Quarterly Sales (US\$ Million), 2021
- Figure 8-23: Europe Yescarta Quarterly Sales (US\$ Million), 2021
- Figure 8-24: Global Yescarta Quarterly Sales (US\$ Million), 2020
- Figure 8-25: Global Yescarta Sales Forecast (US\$ Million), 2022 2028
- Figure 8-26: US Yescarta Sales Forecast (US\$ Million), 2022 2028
- Figure 8-27: Europe Yescarta Sales Forecast (US\$ Million), 2022 2028
- Figure 8-28: US Tecartus FDA Approval by Indication
- Figure 8-29: UK Per Unit Price of Tecartus Infusion Bag (GBP/US\$), May'2022
- Figure 8-30: Tecartus Per Unit Price of Intravenous Suspension by Region (US\$), May'2022
- Figure 8-31: Tecartus Global Sales by Region (US\$ Million), Q1'2022
- Figure 8-32: Tecartus Global Sale by Region (%), Q1'2022
- Figure 8-33: Global Tecartus Annual Sales (US\$ Million), 2020 & 2021
- Figure 8-34: US Tecartus Annual Sales (US\$ Million), 2020 & 2021
- Figure 8-35: Tecartus Global Sales by Region (US\$ Million), 2021
- Figure 8-36: Tecartus Global Sales by Region (%), 2021
- Figure 8-37: Global Yescarta Quarterly Sales (US\$ Million), 2021
- Figure 8-38: US Yescarta Quarterly Sales (US\$ Million), 2021
- Figure 8-39: Europe Yescarta Quarterly Sales (US\$ Million), 2021
- Figure 8-40: Global Tecartus Sales Forecast (US\$ Million), 2022 2028
- Figure 8-41: US Tecartus Sales Forecast (US\$ Million), 2022 2028
- Figure 8-42: Breyanzi Approval Year by Region
- Figure 8-43: Breyanzi Global Sales by Region (US\$ Million), Q1'2022
- Figure 8-44: Breyanzi Global Sales by Region (%),Q1'2022
- Figure 8-45: Global Breyanzi Quarterly Sales (US\$ Million), Q2-Q4'2021
- Figure 8-46: Global Breyanzi Sales Forecast (US\$ Million), 2022 2028
- Figure 8-47: US Breyanzi Sales Forecast (US\$ Million), 2022 2028
- Figure 8-48: Abecma Approval Year by Region
- Figure 8-49: Abecma Global Sales by Region (US\$ Million), Q1'2022
- Figure 8-50: Abecma Global Sales by Region (%),Q1'2022
- Figure 8-51: Abecma Global Sales by Region (US\$ Million), 2021



- Figure 8-52: Abecma Global Sales by Region (%), 2021
- Figure 8-53: Global Abecma Quarterly Sales (US\$ Million), Q2-Q4'2021
- Figure 8-54: US Abecma Quarterly Sales (US\$ Million), Q2-Q4'2021
- Figure 8-55: Global Abecma Sales Forecast (US\$ Million), 2022 2028
- Figure 8-56: US Abecma Sales Forecast (US\$ Million), 2022 2028
- Figure 8-57: China Carteyva Sales Forecast (US\$ Million), 2022 2028
- Figure 8-58: Global Carvykti Sales Forecast (US\$ Million), 2022 2028
- Figure 9-1: US Cancer Incidences & Deaths (Million), 2020 & 2025
- Figure 9-2: US vs. ROW CAR T Cell Therapy Market Size (US\$ Million), 2021
- Figure 9-3: US vs. ROW CAR T Cell Therapy Market Size (%), 2021
- Figure 9-4: US CAR T Cell Therapy Market Size (US\$ Million), 2022 2028
- Figure 9-5: US Cost of Drug & Total Cost of Treatment with CAR T Cell Therapy (US\$), 2021
- Figure 9-6: US Cost of Single Infusion & Reimbursement Cost for Abecma & Breyanzi (US\$)
- Figure 9-7: US Out of Pocket Cost & Reimbursement Cost for Abecma & Breyanzi (%)
- Figure 10-1: UK Cancer Incidences & Deaths, 2020 & 2025
- Figure 10-2: UK vs. ROE CAR T Cell Therapy Market Size (US\$ Million), 2021
- Figure 10-3: UK vs. ROE CAR T Cell Therapy Market Size (%), 2021
- Figure 10-4: UK CAR T Cell Therapy Market Size (US\$ Million), 2022 2028
- Figure 10-5: Germany Cancer Incidences & Deaths, 2020 & 2025
- Figure 10-6: Germany vs. ROE CAR T Cell Therapy Market Size (US\$ Million), 2021
- Figure 10-7: Germany vs. ROE CAR T Cell Therapy Market Size (%), 2021
- Figure 10-8: Germany CAR T Cell Therapy Market Size (US\$ Million), 2022 2028
- Figure 10-9: Spain Cancer Incidences & Deaths, 2020 & 2025
- Figure 10-10: Spain vs. ROE CAR T Cell Therapy Market Size (US\$ Million), 2021
- Figure 10-11: Spain vs. ROE CAR T Cell Therapy Market Size (%), 2021
- Figure 10-12: Spain CAR T Cell Therapy Market Size (US\$ Million), 2022 2028
- Figure 10-13: France Cancer Incidences & Deaths, 2020 & 2025
- Figure 10-14: France vs. ROE CAR T Cell Therapy Market Size (US\$ Million), 2021
- Figure 10-15: France vs. ROE CAR T Cell Therapy Market Size (%), 2021
- Figure 10-16: France CAR T Cell Therapy Market Size (US\$ Million), 2022 2028
- Figure 10-17: Europe Cancer Incidences & Deaths (Million), 2020 & 2025
- Figure 10-18: Europe vs. ROW CAR T Cell Therapy Market Size (US\$ Million), 2021
- Figure 10-19: Europe vs. ROW CAR T Cell Therapy Market Size (%), 2021
- Figure 10-20: Rest of Europe CAR T Cell Therapy Market Size (US\$ Million), 2022 2028
- Figure 10-21: UK Average Cost of Reimbursement with Kymriah & Yescarta per QALY (Euro/US\$)



- Figure 11-1: China Cancer Incidences & Deaths (Million), 2020 & 2025
- Figure 11-2: China CAR T Clinical Trials by Phase'2020
- Figure 11-3: China Top 5 Pharmaceutical Companies Supporting CAR T Clinical Trials'2021
- Figure 11-4: China CAR T Cell Therapy Market Size (US\$ Million), 2021 2028
- Figure 12-1: Japan Cancer Incidences & Deaths (Million), 2020 & 2025
- Figure 12-2: Japan vs. ROW CAR T Cell Therapy Market Size (US\$ Million), 2021
- Figure 12-3: Japan vs. ROW CAR T Cell Therapy Market Size (%), 2021
- Figure 12-4: Japan CAR T Cell Therapy Market Size (US\$ Million), 2022 2028
- Figure 12-5: Japan Current Retail & Reimbursed Price for Kymriah (JPY/US\$), 2021
- Figure 13-1: South Korea Cancer Incidences & Deaths, 2020 & 2025
- Figure 13-2: South Korea CAR T Cell Therapy Market Size (US\$ Million), 2021 2028
- Figure 14-1: Australia Cancer Incidences & Deaths, 2020 & 2025
- Figure 14-2: Australia vs. ROW CAR T Cell Therapy Market Size (US\$ Million), 2021
- Figure 14-3: Australia vs. ROW CAR T Cell Therapy Market Size (%), 2021
- Figure 14-4: Australia CAR T Cell Therapy Market Size (US\$ Million), 2022 2028
- Figure 15-1: Taiwan CAR T Cell Therapy Market Size (US\$ Million), 2021 2028
- Figure 16-1: Global CAR T Cells Clinical Pipeline by Company, 2022 till 2028
- Figure 16-2: Global CAR T Cells Clinical Pipeline by Country, 2022 till 2028
- Figure 16-3: Global CAR T Cells Clinical Pipeline by Indication, 2022 till 2028
- Figure 16-4: Global CAR T Cells Clinical Pipeline by Phase, 2022 till 2028
- Figure 19-1: Favorable Market Parameters of CAR T Cell Therapy
- Figure 19-2: Challenges to Market Growth of CAR T Cell Therapy



## **List Of Tables**

#### LIST OF TABLES

Table 3-1: Antigens which are targeted by Chimeric Antigen Receptor

Table 5-1: CAR T Cell – Per Production Cost (US\$)

Table 6-1: Advantage of VivoVec Platform over Traditional Platform

Table 6-2: ENLIGHTen - Phase I Trial Initiation & Completion Year

Table 9-1: US – FDA Approved CAR T Cell Therapy Products

Table 10-1: Europe – Approved CAR T Cell Therapy Products

Table 12-1: Japan – MHLW Approved CAR T Cell Therapy Products

Table 14-1: Australia – Approved CAR T Cell Therapy Products

Table 20-1: Clinical Pipelines of Products



#### I would like to order

Product name: Global CAR T Cell Therapy Market & Clinical Trials Insight 2028

Product link: https://marketpublishers.com/r/GD85161F70CEN.html

Price: US\$ 3,000.00 (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 <a href="https://marketpublishers.com/r/GD85161F70CEN.html">https://marketpublishers.com/r/GD85161F70CEN.html</a>

To pay by Wire Transfer, please, fill in your contact details in the form below:

First name:	
Last name:	
Email:	
Company:	
Address:	
City:	
Zip code:	
Country:	
Tel:	
Fax:	
Your message:	
	**All fields are required
	Custumer signature

Please, note that by ordering from marketpublishers.com you are agreeing to our Terms & Conditions at <a href="https://marketpublishers.com/docs/terms.html">https://marketpublishers.com/docs/terms.html</a>

To place an order via fax simply print this form, fill in the information below and fax the completed form to +44 20 7900 3970