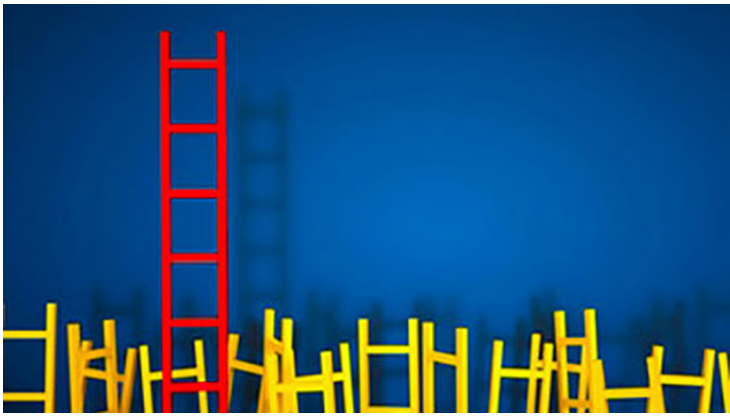


Cellular immunotherapies represent long-term opportunity in Immuno-oncology space

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While cellular immunotherapies, which encompass dendritic cell therapy and chimeric antigen receptor T-cell (CAR-T) therapy, are expected to show promising results in combination treatments in the next few years, they are unlikely to make a significant impact on the immuno-oncology market in the short term according to research and consulting firm GlobalData.

The company's latest report states that recent advancements in the field of adoptive T-cell therapy have created much excitement surrounding CAR-T therapy as a potential cure for a variety of cancers.

Indeed, the treatment hit the headlines in February 2016 after a preliminary clinical trial found that six out of the seven patients treated with CAR-T therapy were in complete remission.

Dr Dan Roberts, GlobalData's Senior Analyst covering Oncology and Hematology, says: "Although the immuno-oncology space will be dominated by immune checkpoint inhibitors, which GlobalData forecasts to achieve sales of \$24 billion by 2024, cellular immunotherapies and cancer vaccines will continue to be pursued, despite past failures."

Novartis' CAR-T therapy, CTL019, will most likely be the first of its kind to be approved for patients with acute leukemia, giving it a head start in the segment.

At present, Juno Therapeutics' JCAR-015, and Kite Pharma's KTL-019 are also at the forefront of CAR-T cell therapy development, and all three products have FDA breakthrough therapy designation.

Dr Roberts continues: "Early studies of these drugs have demonstrated very impressive remission rates of up to 90%, although it is still too early to tell if these remissions will turn into cures. Downsides of CAR-T therapies include their association with severe immune toxicities, specifically cytokine release syndrome (CRS), which can be fatal.

"Sales of cell therapies will be very low to 2024, especially when compared to checkpoint inhibitors. CAR-T cells, because of

their high administration costs, are only primarily being developed in blood cancer populations, and GlobalData envisages that they will have overall low uptake and will be restricted to selected patients in large academic centers during the forecast period.

"However, the research being conducted into these kind of immunotherapies is indicative of an innovative and changing immuno-oncology arena that offers considerable opportunities in the long term."