

Medical Research Agency

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MRA will donate 100 million for cancer treatment with a breakthrough CAR-T cells

The Medical Research Agency is launching a programme aimed at developing and introducing to Poland on a large scale a breakthrough cancer treatment using genetically modified CAR-T cells (adoptive therapy with CART cells). This type of therapy is particularly important in the treatment of leukaemia in the youngest patients. CAR-T cell technology changes the perspective of oncological treatment.

The grant of PLN 100 million will introduce our country to the world's leading immunotherapists such as the USA or Israel, which at the same time will allow us to become independent from the oligopoly of big companies. Thanks to this, we will provide Polish patients with innovative treatment at many times lower prices - emphasizes the President of the Medical Research Agency - Radosław Sierpiński, M.D. Ph.D.

A breakthrough in the treatment of blood cancer

CAR-T cell therapy is the most advanced and personalized technology used in haematooncological treatment, which consists in producing a drug for each patient based on his or her own lymphocytes. The use of the immune system to fight cancer consists in taking T lymphocytes from the patient, which are then genetically modified in the laboratory. This gene encodes the production by T lymphocyte of a receptor recognising specific antigens of cancer cells. For example, CAR-T Z cell therapy can achieve total remission in approx. 90%. patients with acute lymphoblastic leukaemia, with remission in approx. 50 percent. of patients is permanent. In other therapies, the chance of curing such patients is close to zero.

A new era of treatment for children with leukaemia and lymphoma

The introduction of CAR-T cells into Poland is important not only from the point of view of scientific research, but above all from the point of view of patients' chances. Cancers originating from B lymphocytes and their precursors account for about 80% of all leukemia cases in children in Europe. The prognosis of patients with a relapse after standard therapy is very bad. The indications for CAR-T therapy are malignant lymphomas and acute leukaemia in children and young adults who do not have a therapeutic option, i. e. patients resistant to treatment or with relapse after two lines of treatment. In some haemato-oncological patients, none of the methods known to us today is effective, let alone a permanent cure of the cancer. Therefore, CAR-T technology raises great hopes in the medical environment.

CAR-T cells are the most advanced, personalized form of cancer immunotherapy - a technology of the future, which in the next decade may become the basic treatment method in oncology. The call of the Medical Research Agency creates an opportunity to develop and implement CAR-T cell-based therapy

in Poland; it will contribute to increasing its availability, and Polish research and production laboratories will be located among biotechnology leaders in the world - comments prof. Sebastian Giebel, M.D., Ph.D - Deputy Director for Clinical Matters in the Cancer Centre in Gliwice.

Millions of dollars for treatment

Immunotherapy with CAR-T cells is very effective, but also extremely expensive and complicated to carry out. Currently, the treatment of a single patient offered by companies costs up to half a million dollars, which usually leaves the treatment out of reach of patients. If the CAR-T cells are developed in their own laboratories, these costs are even ten times lower. The funding provided by the Medical Research Agency is to enable research to be carried out by a Polish consortium and lead to the widespread use of this therapy in the Polish health care system. Thanks to the joint declaration of Presidents Andrzej Duda and Donald Trump, based on American technology derived from the MD Anderson Medical Center, we can already truly develop the biotechnology sector and treat Poles with the latest therapies - concludes President Sierpiński.

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