

A novel immunotherapy technique to treat patients with osteosarcoma and neuroblastoma

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A novel phase 1 clinical trial that leverages T-cell immunotherapy is now under way at Karmanos Cancer Institute (KCI) in Detroit and Memorial Sloan-Kettering Cancer Center in New York City; bringing new hope to children and young adults with osteosarcoma and neuroblastoma. This new clinical trial is being funded by charity partners Solving Kids' Cancer and Fishin' For The Cure.

T-cell therapy to treat both adult and childhood cancers has been in recent news for the dramatic responses seen in some patients, who've experienced a complete remission or have no more [cancer cells](#) in their body. A type of immunotherapy, T-cell therapy trains a patient's own [white blood cells](#) that are collected and engineered to recognize specific targets on the surface of cancer cells. These "armed" T-cells are cloaked with a bi-specific T-cell engaging antibody (BiTE) using a new humanized antibody called hu3F8, and returned to the patients as a vaccine with one mission, kill cancer cells. Scientists believe that by incorporating this BiTE antibody, the T-cells will be more effective.

"Children and young adults battling osteosarcoma and neuroblastoma need curative treatment options after chemotherapy and targeted drugs stop working," said Tracy Russo, the Executive Director of Fishin' For The Cure. "We are excited about the possibilities."

This new T-cell therapy targets GD2, an antigen on the tumor cell

surface in over 90 percent of osteosarcomas and [neuroblastoma](#) and CD3, a receptor found on healthy T-cells. This dual-targeted approach using CD3 and another target has been successfully shown to be safe and elicited immune responses in breast cancer patients. In addition, the armed T-cells train the other T-cells in the body to continue to recognize and kill tumor cells.

"As patients receive multiple infusions of this new T-cell therapy, which in essence 'vaccinates' patients against their own cancer cells, it has the potential to induce long-term immune responses while being less toxic," said Scott Kennedy, the Executive Director of Solving Kids' Cancer.

Provided by Solving Kids' Cancer

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