Research at a Glance

Expanding cytotoxic T lymphocytes from umbilical cord blood to target three viruses

What’s new:

Children’s National Health System is the only pediatric hospital in the nation that grows personalized T-cells from naïve cord blood (CB), training these CB-derived cells to simultaneously fight adenovirus, cytomegalovirus, and Epstein-Barr virus to control viral infections after transplantation. Here are a number of the critical steps during that three-month manufacturing process.

1. Initiate the EBV-LCL.
2. Thaw 20 percent of the cord blood that has been reserved for the patient’s transplant.
3. Isolate the dendritic cells by adherence.

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