Emerging technology can transform blood stem cell gene therapy from a cost-prohibitive, highly-specialized and complex infrastructure into an inexpensive strategy with a small footprint for global utility.

Point-of-Care Blood Stem Cell Gene Therapy

Maximizing the utility of emerging technologies to make gene therapy feasible within the constraints of global healthcare settings.

**Current Infrastructure**

**Patient cell product** is transferred to **cGMP** compliant facility. [1-2 hours]

**Highly trained staff** manually prepare product for stem cell isolation. [3-6 hours]

**Automated stem cell isolation** is performed on a previous generation technology with minimal staff interface. [1 hour]

**Isolated stem cells** are manually cultured during the process of gene transfer requiring highly trained staff and clean room procedures. [2-3 days]

**Samples of the cell product** obtained throughout manufacturing are subjected to testing for infusion safety. [1-2 hours]

**Cells** are infused back into the patient. [1-2 hours]

**Source/credit:** Jen Adair, Fred Hutchinson Cancer Research Center