

Ensuring a patient's cell and gene therapy goes the distance with perfect last-mile logistics



Cell and gene therapies (CGTs) are bringing hope to patients around the world. For a cancer patient in India, World Courier expedited last-mile logistics to ensure successful treatment.

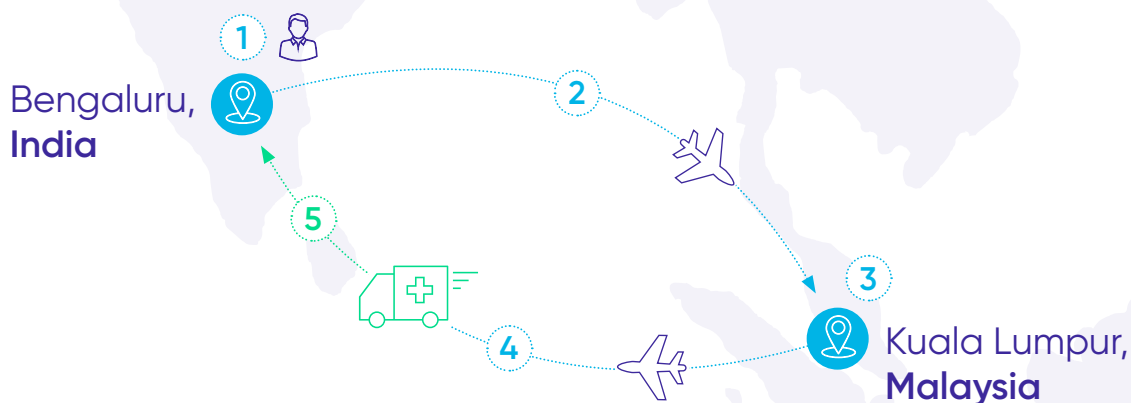
Cancer can be a devastating diagnosis for a patient, with the disease and traditional treatments having a significant impact on their quality of life. Global diagnoses are on the rise; with 27.5 million new cases of cancer expected each year by 2040¹.

Across the world, innovators are working to introduce CGTs to fight cancers and other chronic, life-threatening conditions. Also known to the life science industry and regulators as advanced therapy medicinal products (ATMPs), these cutting-edge treatments are proving to enhance the quality and efficacy of cancer patient care and hopefully, even provide a cure for their condition.

For years, Nagaraj*, a young man living near Bengaluru, India, had been fighting a rare cancer before getting the opportunity to receive a ground-breaking autologous T-cell-based immunotherapy developed in Malaysia.

¹<https://www.cancerresearchuk.org/health-professional/cancer-statistics/worldwide-cancer#heading-Zero>

* An alias to protect the patient's privacy





A unique and personal logistics challenge

Autologous ATMP therapeutics are unique in the way they are manufactured because the patient's cells are drawn in one location, shipped to another location for processing, then returned to be re-infused into the patient to complete the treatment.

To receive his life-changing treatment, Nagaraj was challenged to access the therapy because his hospital and attending physicians in Bengaluru are more than 1,700 miles from the ATMP developer's manufacturing facility in Kuala Lumpur, Malaysia.

To complete the nearly 3,000-mile journey in a timely and controlled fashion, Nagaraj's cells required a logistics solution that assured the controlled, cold-chain custody of his outbound cells and then the same for his inbound treatment.

The solution

Cell viability is dependent on time and temperature. There is no room for error, temperature excursion, or delay. For the sake of Nagaraj, his doctors, and his treatment, World Courier leveraged its unique network of logistics expertise and technologies capable of going the distance and the extra mile if need be.

Meeting the increasingly intricate, demanding, and long-distance choreographies of World Courier's biologics customers begins with a rock-solid shipping container solution. To control temperature and safely transport Nagaraj's blood from Bengaluru to Kuala Lumpur, a 12L Global Thermal Container was chosen for its ability to sustain internal temperatures of +2°C – +8°C, regardless of external ambient temperatures.

For biologics of all kinds, but especially patient blood and tissues necessary for ATMP products, there can never be a moment in transit when the exact condition and disposition of the container are not immediately known. Logistically, the data serves as the product's virtual lifeline. World Courier kept a robust virtual and real-time eye on the shipping container transiting Nagaraj's cells by leveraging advanced sensing, cloud-enabled GPS tracking, and radio frequency identification (RFID) capabilities.

Leveraging the Green Corridor

Nagaraj's admission was contingent on shipping the cell lines so he could receive treatment by the next day. Nagaraj was admitted to the hospital upon this confirmation and the pre-infusion process started. However, bank holidays and overbooked flights increased the risk of an unacceptable delay – the treatment had to arrive within 48 hours.

As a solution, World Courier sought to take advantage of the Green Corridor. This special provision was created by the Indian customs and police authorities to close traffic from the port to the hospital so ambulances can transport vital therapies and organs for transplant unhindered by congestion. Roads are closed specifically for this journey, and all traffic lights are set to green for ambulance transport.

To deliver Nagaraj's treatment, World Courier obtained a letter from the traffic police department explaining the urgency of the shipment to the Indian customs authority.



Customs understood the challenges and gave permission to clear the shipment upon arrival, the first time this had ever been done in Bengaluru.

The shipment in this instance arrived at 11:40pm – normal customs clearance would usually be completed by 5–6pm the following day and there would have been a journey of three hours or more in normal traffic. Had World Courier not sought to use the Green Corridor, the treatment would have arrived at 9pm – almost 22 hours after arrival.

However, customs were cleared and transport undertaken in under three hours – arriving at 2:40am – saving approximately 18 hours of transit time.

“For decades we have been leveraging our networks and regional insight for this client and our track record of excellence speaks for itself. What is exciting however is that with this client, not only is World Courier providing their patients safe, effective access to these advanced therapeutics, but together we are exploring new ways to deliver them in line with the patient’s advancing needs.”

Dhananjay Achudan

Director, SEA and India, World Courier

The outcome

For Nagaraj, his doctors, and the ATMP developer, the solution was perfect by design. His cells, drawn in Bengaluru, were prepared for shipping and then sent to Kuala Lumpur, a process that took about three weeks. The return leg was much faster and Nagaraj’s treated cells and life-saving treatment were returned in a MVE dry shipper to Bengaluru in three days. A recent note from the client confirmed how vital logistics were to delivering Nagaraj’s treatment successfully:

“It is my great pleasure to let you know that for Nagaraj, the life-saving shipment from Malaysia was more than perfect in terms of logistics. The way your team handled the shipment was excellent, from pick up at our lab until the final port of destination in Bengaluru. Shipping and conditions in this part of the world are always challenging, which is why we have been opting for World Courier for the last two decades. The fact that you and your team have been taking up the entire responsibility and ownership of all our critical shipments and delivering them on time means we can create and deliver these therapeutics to patients at a life-saving pace.”

Irfan Syed

Head, Hemogene Consulting Service

For peace of mind in delivering your high-value fragile therapies to patients, [contact us](#) today.