

Rajasthan's Government Hospital to offer CAR-T Cell Therapy

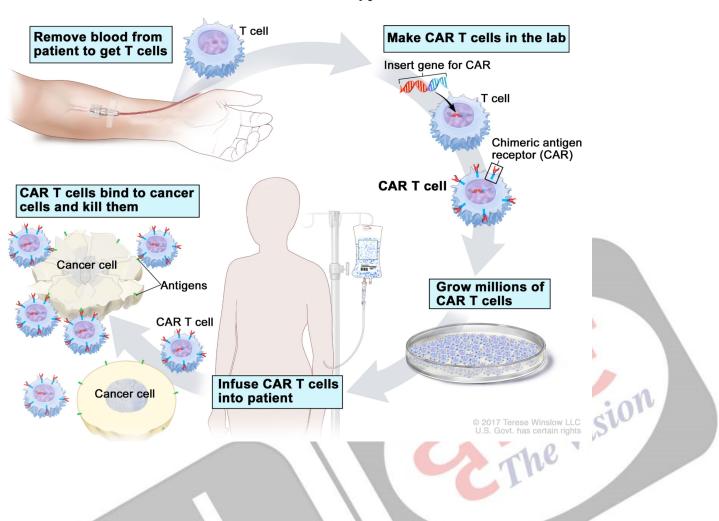
Why in News?

SMS Hospital in Jaipur will become the **first government hospital in Rajasthan** to establish a dedicated Department of Clinical Haematology (DCH), offering **CAR-T Cell Therapy.**

Key Points

- About: SMS Hospital has established a Department of Clinical Haematology (DCH) for the treatment of all types of haematological cancers and blood disorders, including bleeding disorders and bone marrow transplants.
 - This new department will offer <u>CAR-T Cell Therapy</u>, an advanced treatment option that has been previously available only at private hospitals in the state.
 - While the department is currently based at SMS Hospital, it will eventually be moved to the **State Cancer Institute** for better infrastructure and facilities.
- CAR-T Cell Therapy:
 - About: CAR-T Cell Therapy, or Chimeric Antigen Receptor T-Cell Therapy, is India's first indigenous gene therapy for cancer treatment.
 - This innovative therapy is based on **genetic modifications** and offers a promising treatment for certain cancers, including **blood cancers**.
 - It modifies a <u>patient's T-cells</u> (a type of immune cell) to fight cancer more effectively.
 - A patient's T-cells are extracted from their blood and genetically modified (to recognize and attack cancer cells).
 - These modified cells, known as Chimeric Antigen Receptor (CAR) T-cells, are multiplied and reintroduced into the patient to target B-cells and prevent relapses.
 - The therapy was developed in India at just a **tenth of the cost** compared to its international price, making it more accessible to Indian patients.
 - Importance: India's CAR T-cell therapy provides an additional, patient-specific treatment option, as the modified T-cells remain in the body, offering long-term immunity against cancer recurrence.
 - It is a patient-specific treatment, making it **highly precise** compared to traditional chemotherapy.
 - Notably, an **82-year-old woman from Jaipur** became the oldest recipient of CAR-T therapy in the country.
 - NexCAR19: In 2023, <u>NexCAR19</u> became India's first approved indigenous CAR-T cell therapy, developed through a collaboration between IIT Bombay, Tata Memorial Centre, and ImmunoACT (a company incubated at IIT Bombay).

CAR T-cell Therapy



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