



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 [CAR-T Cell Therapy](#), 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 [patient's T-cells](#) (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, [NexCAR19](#) 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

