

KFSHRC Pioneers Gene Therapy with Local Production of T-Cells and Plans to Scale Up to 100 Treatments Annually

RIYADH, SAUDI ARABIA, October 13, 2025 /EINPresswire.com/ -- King Faisal Specialist Hospital and Research Centre (KFSHRC) has reinforced its leading position in Saudi Arabia's healthcare research and development ecosystem through a series of groundbreaking achievements, including the local manufacturing of chimeric antigen receptor T-cells (CAR-T) and the launch of the first national clinical trial for advanced gene therapy.



The study led to the successful treatment of the first patient in the Kingdom with refractory acute lymphoblastic leukemia, using CAR-T cells manufactured locally, a milestone that highlights Saudi Arabia's growing capabilities in gene and cell-based therapies.

The clinical trial was conducted at KFSHRC's state-of-the-art manufacturing facility in Riyadh, using a closed-system technology that ensures the highest levels of precision and quality. Supervised by the Saudi Food and Drug Authority (SFDA), this development places the Kingdom among the few countries worldwide with the capacity to both produce and clinically test gene therapies within an integrated national research environment.

Local production of CAR-T therapy has significantly reduced treatment costs from SR 1.3 million to around SR 250,000 per patient, while cutting manufacturing time from 28 days to just 12 to 14 days. Previously, such therapies were produced abroad, facing logistical challenges related to shipping, storage, and delivery, a process that often delayed patient access. This milestone now enables Saudi patients to receive timely, life-saving treatment within the Kingdom.

CAR-T therapy represents one of the most advanced forms of gene-directed cancer treatment, designed for patients who do not respond to conventional therapies such as leukemia and lymphomas, by enhancing the immune system's ability to recognize and destroy cancer cells,

offering a renewed sense of hope for those battling the most challenging types of cancer.

KFSHRC continues to expand its production capacity, targeting 100 gene-therapy treatments annually, a goal aligned with the National Biotechnology Strategy launched earlier this year by His Royal Highness Prince Mohammed bin Salman bin Abdulaziz Al Saud, Crown Prince and Prime Minister. The strategy aims to improve national health, enhance quality of life, localize biotechnological industries, and maximize their economic impact, positioning Saudi Arabia as a global hub for life-sciences innovation by 2040.

Through its participation in the Global Health Exhibition 2025 in Riyadh, KFSHRC showcases a selection of its leading medical innovations to visitors at its pavilion, including the T-cell therapy program, robotic surgeries, preimplantation genetic diagnosis, as well as epilepsy, liver, and small intestine transplant surgeries.

KFSHRC has been ranked first in the Middle East and North Africa and 15th globally in the list of the world's top 250 Academic Medical Centers for the second consecutive year and has been recognized as the most valuable healthcare brand in the Kingdom and the Middle East, according to the 2024 Brand Finance rankings. It was included in the world's best 250 hospitals and in the World's Best Smart Hospitals list for 2025 by Newsweek magazine.

Riyadh

King Faisal Specialist Hospital and Research Centre

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