

KFSH Advances Healthcare Innovation Across AI, Robotic Surgery, Clinical Research and Emergency Care

RIYADH, SAUDI ARABIA, October 22, 2026 /EINPresswire.com/ -- King Faisal Specialist Hospital and Research Centre (KFSH) is advancing healthcare innovation across four connected areas: artificial intelligence, robotic surgery, clinical research, and emergency care. Each is measured by results already delivered to patients rather than concepts still in development.

In artificial intelligence, KFSH has built an enterprise ecosystem that combines responsible governance, in-house development, and partnerships. Its applications read electrocardiograms, detect neurological conditions, and screen for diabetic retinopathy, alongside six KFSH-built AI agents supporting staff inquiries, policies, radiology, pulmonary-function testing, clinical documentation, and patient communication.

In robotic surgery, KFSH has built a record of world firsts: the first fully robotic liver transplant in 2023, the first fully robotic heart transplant in 2024, the first robotic-assisted implantation of a HeartMate 3 heart pump in 2025, and in 2026 the first fully robotic living-donor liver transplant and the first case combining seven cardiac interventions in a single fully robotic approach. Its Heart Center of Excellence now performs more than 100 robotic cardiac procedures annually.

In clinical research, KFSH conducted nearly half of all clinical trials registered in Saudi Arabia during the first half of 2025. Its portfolio includes a locally manufactured CAR-T therapy administered under a Phase I protocol to a patient with relapsed or refractory leukemia, and a gene therapy trial for sickle cell disease using the patient's own genetically modified stem cells.

In emergency care, an AI-enabled Patient Flow and Capacity Command Centre and hospital-wide process redesign reduced median Emergency Department boarding time by 75%, from more



A KFSH researcher working in an advanced laboratory in Riyadh

than 13 hours in 2023 to 3.2 hours by mid-2025, placing KFSH among the top 5% of high-capacity academic medical centers worldwide on that measure. A dedicated cardiac catheterization lab inside the Emergency Department has halved the time between a heart attack patient's arrival and the reopening of a blocked artery.

The four areas share one test: whether an innovation shortens the path to the right treatment, improves safety, or opens an option that did not previously exist. By pairing results with the systems that produced them, KFSH offers its experience as a reference for health systems seeking to move innovation from pilot projects into routine care.

King Faisal Specialist Hospital and Research Centre has been ranked first in the Middle East and Africa and 12th globally among the world's top 250 academic medical centers for 2026. It was also recognized as the most valuable healthcare brand in the Kingdom and the Middle East for 2026, according to Brand Finance, and listed by Newsweek among the World's Best Hospitals, World's Best Smart Hospitals, and World's Best Specialized Hospitals for 2026.

KFSH
Riyadh

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