

A Groundbreaking Moment in Neurosurgery: Saudi Arabia's KFSHRC Performs the World's First Robotic Brain Tumor Resection

RIYADH, SAUDI ARABIA, October 20, 2025 /EINPresswire.com/ -- In a historic leap for robotic medicine, King Faisal Specialist Hospital and Research Centre (KFSHRC) in Riyadh has successfully performed the world's first robotic intracranial tumor resection, a groundbreaking achievement that sets a new global standard in neurosurgical precision and recovery.

The surgery was conducted on a 68-year-old man experiencing severe headaches and loss of concentration and involved removing a 4.5-centimeter brain tumor using robotic arms. The patient was discharged fully conscious within 24 hours, a recovery time nearly four times faster than traditional brain surgeries.



Hospital officials credited the robotic tumor resection with minimizing surgical trauma and accelerating recovery. According to Dr. Homoud Aldahash, Consultant of Skull Base Tumors at KFSHRC, who performed the surgery, the robotic system allowed exceptional precision and control, enabling surgeons to navigate critical neurovascular structures with a high level of safety. "The patient's same-day discharge, fully conscious and without complications, represents a new benchmark for neurosurgical innovation," he added.

The one-hour surgery used robotic arms guided by a 3D optical system, allowing surgeons to operate with a clear and magnified view of the brain. The use of advanced image-guided navigation technology ensured precise removal of the tumor while protecting vital areas of the brain.

Dr. Majid Alfayyadh, CEO of KFSHRC, linked the milestone to the hospital's ongoing transformation journey. "This achievement reflects KFSHRC's growing role in shaping the future of global medicine," he said. "It aligns perfectly with our vision, where innovation and patient-

centered care define the future of healthcare”.

Before the advent of robotic neurosurgery, similar procedures required manual removal under a surgical microscope where precision depended heavily on human steadiness and visual clarity. Robotic systems now provide enhanced instrument stability, tremor elimination, and superior visualization, redefining global standards of safety and precision in neurosurgical care.

This landmark procedure adds to KFSHRC's expanding portfolio of robotic surgical breakthroughs. The institution previously performed the world's first robotic heart transplant and robotic liver transplant, earning international acclaim and solidifying its standing among the world's leading centers for robotic and minimally invasive surgery.

As healthcare systems worldwide embrace automation and precision-guided surgery, KFSHRC's latest success underscores its emergence as a global pioneer in next-generation medical innovation.

KFSHRC has been ranked first in the Middle East and North Africa and fifteenth globally among the world's top 250 academic medical centers 2025. It was also recognized as the most valuable healthcare brand in the Middle East by Brand Finance 2025 and listed among Newsweek's World's Best Hospitals 2025, Best Smart Hospitals 2026, and Best Specialized Hospitals 2026, reaffirming its position as a global leader in innovation-driven patient care.

For more information, visit www.kfshrc.edu.sa or contact our media team at mediacoverage@kfshrc.edu.sa

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