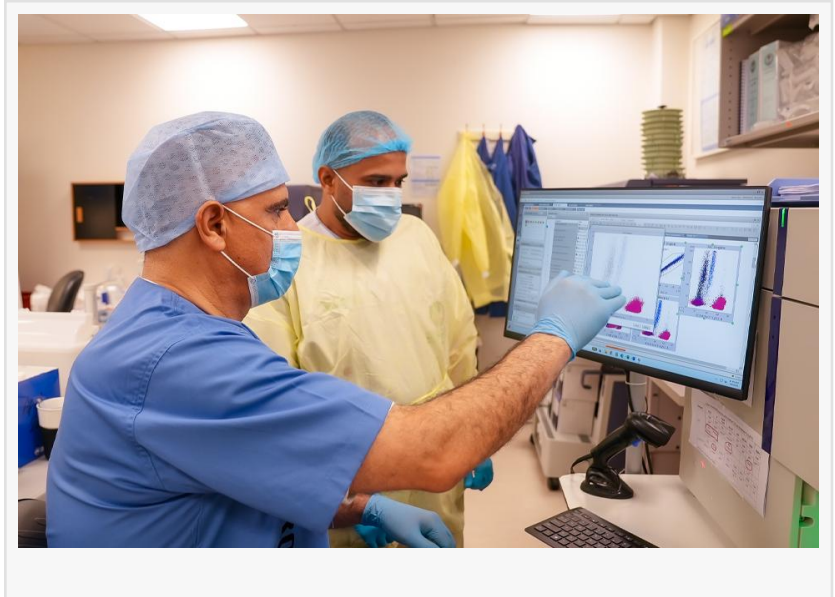


# World First: KFSH Jeddah's Single-Session Stem Cell Protocol Sets Global Standard in Donor Safety and Efficiency

JEDDAH, SAUDI ARABIA, July 7, 2026

[/EINPresswire.com/](https://www.einpresswire.com/) -- King Faisal Specialist Hospital and Research Centre in Jeddah has successfully developed and implemented the world's first protocol of its kind, using an algorithm to accurately estimate the expected stem cell yield from each donor. The protocol enabled stem cell collection to be completed in the first session for 100% of male donors and 94.9% of all donors, while eliminating the need for third and fourth collection sessions altogether.



The protocol is designed to limit repeat collection sessions and the risks they can pose to donor safety. Figures from the U.S. National Marrow Donor Program show that repeat sessions raise a donor's likelihood of being hospitalized for recovery sixfold. By reducing how often sessions must be repeated, the protocol addresses that risk directly and sets a new global benchmark that balances donor safety with treatment efficiency.

For patients, the protocol has improved the outcomes of stem cell transplantation. Survival reached 91.2 percent at 100 days after transplant, above the global average and a key marker of early recovery. The results were documented in a study published in *Blood Global Hematology*, a journal of the American Society of Hematology.

"Sparing healthy donors from repeated stem cell collection sessions is both a clinical and an ethical priority," said Professor Ashraf Dada, Chair of the Department of Pathology and Laboratory Medicine at KFSH Jeddah and the study's principal investigator.

He explained that the algorithm, developed over three years and tested on 138 donors, enabled the medical team for the first time to plan the opening session with close to 92 percent accuracy in predicting how many cells would be collected. This improves the donor's experience and

safety, supports advance planning of the collection process, and speeds treatment for patients awaiting a transplant.

The breakthrough reflects KFSH's broader drive to harness data and scientific analysis in advancing specialized care, allowing treatment to be tailored to the clinical condition and needs of each donor and recipient. It also reinforces the hospital's standing as a pioneer of advanced medical solutions, in line with its vision to be the optimal choice for every patient.

King Faisal Specialist Hospital & Research Centre is ranked first in the Middle East and Africa and 12th worldwide among the top 250 academic medical institutions for 2026. Brand Finance named it the most valuable healthcare brand in Saudi Arabia and the Middle East for 2026, and Newsweek has listed it among the World's Best Hospitals, World's Best Smart Hospitals, and World's Best Specialized Hospitals for 2026.

King Faisal Specialist Hospital and Research Centre  
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