

Position Statement

A National Kidney Exchange Program

The concept of kidney paired donation (KPD) was first proposed by Felix Rapaport in 1986¹. KPD involves placing high immunological risk (ABO and/or HLA incompatible) donor-recipient pairs (DRPs) into a program where new 2-way or 3-way (or more) compatible DRPs can be found (see figure 1²).

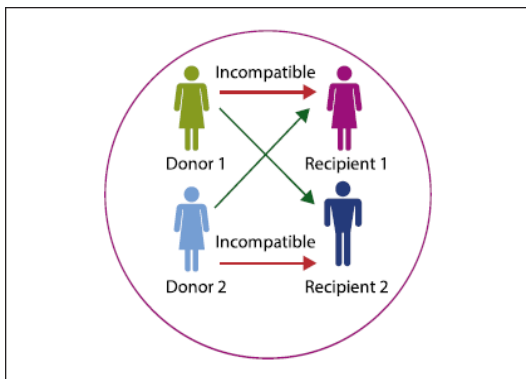


Fig. 1. Kidney paired donation. (Red = incompatible; green = compatible).

When non-directed altruistic donors (NDADs ie. persons who have no specific recipients they want to donate to) are added to this type of program (see figure 2²), they can start a chain of transplants – also called domino transplants. The combination of KPD and domino transplants is called a kidney exchange program (KEP).

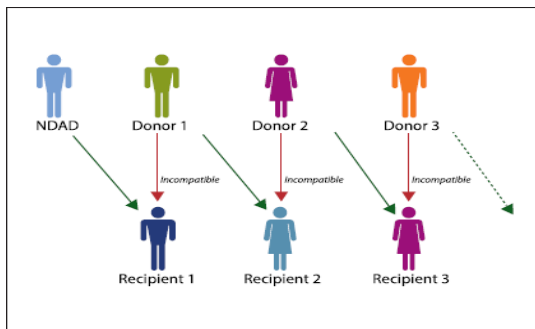


Fig. 2. Using a non-directed altruistic donor (NDAD) to start a chain of transplants. (Red = incompatible; green = compatible).

A KEP is aimed at improving access for these high immunological risk patients. Between 2000 and 2006 KEPs were established worldwide, creating multicentre and national registries.^{1 2 3 4 5} Following an ongoing pilot project at Groote Schuur Hospital started in 2025 which is open to all patients in South Africa, the National Department of Health (NDOH) will soon launch a national Kidney Exchange Program South Africa (KEPSA), under the direction of the Ministerial Advisory Committee for Organ Transplants (MACOT).

¹ de Klerk M, Keizer KM, Claas FH, Witvliet M, Haase-Kromwijk BJ, Weimar W. The Dutch national living donor kidney exchange program. American Journal of Transplantation. 2005;5(9):2302-2305. DOI : 10.1111/j.1600-6143.2005.01024.x



It can be argued that not offering high immunological risk DRPs the option of entering a KEP is not best medical practice and even unethical, when such a program exists in South Africa. This is also the position of the South African Transplantation Society, which formally endorses and supports the KEP at Groote Schuur Hospital and the soon to be launched KEP SA.

Furthermore: -

SATS urges nephrologists and transplant coordinators who have patients with incompatible living donors to read the comprehensive Groote Schuur Hospital package of information (which includes background information, advice on processes to follow as well as consent documents) that is available on the SATS website at https://sats.org.za/?sdm_process_download=1&download_id=25841490

It should be noted that incompatible DRPs need to have MACOT approval before they can be referred for entry onto the program.

Nephrologists and transplant coordinators are encouraged to engage in early discussions of living donation and KEP options with their patients and to optimise recipients medically so that the initial MACOT approval process and the subsequent KEP matching process go smoothly.

Transplant co-ordinators can proactively identify high immunological risk donors during work up and flag them for KEP rather than defaulting them to “unsuitable”. They can then go back to this donor if no other suitable donor is identified.

The success of a KEP relies on enough DRPs being referred to the KEP – the more DRPs on the program, the more likely they are to find new compatible pairs. Waiting time for a transplant can be reduced, dialysis dependence can be minimised and outcomes for patients can be improved through collaborative participation in the kidney exchange program.

It should be noted that both donor nephrectomies and kidney transplants will happen in the “home” transplant centre of the original/related/emotionally connected DRP. Donor nephrectomies should happen simultaneously in the two/three/more transplant centres involved, and only the kidneys will then be transported to the receiving transplant centres i.e. patients do not need to travel to unfamiliar transplant centres.

Priya Walabh
SATS President

Nicola Wearne
SANS President

² ZA Barday, F McCurdie, T du Toit, N Wearne. A kidney exchange programme for South Africa – the time is right. S Afr Med J 2025;115(9):e4081. <https://doi.org/10.7196/SAMJ.2025.v115i9.4081>

³ Hadaya K, Fehr T, Rüsi B, Ferrari-Lacraz S, Jean V, Ferrari P. Kidney paired donation: A plea for a Swiss National Programme. Swiss Medical Weekly. 2015;145:w14083. DOI: 10.4414/smw.2015.14083

⁴ Cole EH, Nickerson P, Campbell P, Yetzer K, Lahaie N, Zaltzman J, et al. The Canadian kidney paired donation program: A national program to increase living donor transplantation. Transplantation. 2015;99(5):985-990. DOI: 10.1097/TP.0000000000000455

⁵ Cantwell L, Woodroffe C, Holdsworth R, Ferrari P. Four years of experience with the Australian kidney paired donation programme. Nephrology (Carlton, Vic.). 2015;20(3):124-131. DOI: 10.1111/nep.12369