

**NHS BLOOD AND TRANSPLANT  
ORGAN DONATION AND TRANSPLANTATION DIRECTORATE**

**KIDNEY ADVISORY GROUP**

OFFERING OF NON-DIRECTED ALTRUISTIC DONORS TO TIER A RECIPIENTS

**INTRODUCTION**

1. From 2012, non-directed altruistic donors (NDADs) have been able to register in UK Living Kidney Sharing Scheme (UKLKSS) matching runs and if matched start a chain of 2 transplants and since 2015, up to 3 transplants. Before 2018, NDADs had the choice of donating to a recipient on the UK kidney transplant list (resulting on 1 transplant) or inclusion in the UKLKSS matching runs, but from 2018 the default option was to register in the UKLKSS.
2. For every NDAD who is registered to be included in the UKLKSS, they are first matched against the UK kidney transplant list to see if there are any high priority recipients that match with the donor. If there is a match, the kidney is offered to the high priority recipient first. If there is no match to a high priority recipient, or an offer to a high priority recipient is declined then the donor is included in the UKLKSS matching run.
3. Under the 2006 Kidney Offering Scheme, a high priority was a long waiting patient (>7 years). Under the 2019 Kidney Offering Scheme, high priority is defined as a recipient in Tier A. Following an update to the 10,000 deceased donor reference pool and the matchability score bandings made in February 2024, there has been a change in the proportion of NDADs going to Tier A recipients compared to those donating to a transplant chain via the UKLKSS. This paper considers the activity and characteristics of recipients benefitting from NDAD kidneys to review whether offering to high priority recipients prior to inclusion in the UKLKSS is still appropriate.

**LAY SUMMARY** Non-directed altruistic donors (NDADs) who wish to donate to a recipient in need of a transplant are offered to the UK Living Kidney Sharing Scheme and if matched, this can lead to a chain of 2 or 3 transplants. Prior to matching with the UK Living Kidney Sharing Scheme, the NDADs are matched against the kidney transplant waiting list to identify any matches with high priority (difficult to match or long waiting) patients. Due to a reclassification of the score that determines how difficult to match each recipient is in 2024, more NDADs have been matched to the high-priority recipients in the period since. This means that fewer NDADs are being matched in the UK Living Kidney Sharing Scheme and initiating 2 or 3 transplant chains. This paper reviews the data over this period and asks KAG members to vote on whether to keep the current process or consider other options.

## DATA AND METHODS

4. Data on donors, recipients and matching runs between January 2020 and December 2025 were extracted from the UK Transplant Registry, held by NHS Blood and Transplant
5. NDADs who donated but did not appear in a UKLKSS matching run are classified as 'Tier A' donations. NDADs who donated via a transplant chain are classified as 'NDAD starting chain'. NDADs who donated to the transplant list, having previously appeared in a UKLKSS matching run are classified as 'Unmatched in UKLKSS'.

## ACTIVITY

6. Table 1 shows the number of NDADs each calendar year during the period of analysis, split by the method of donation. The total number of recipients benefitting from NDADs, including recipients as part of transplant chains are also shown. During this period, 2022 saw the highest number of NDADs with 71, and of these 41 (58%) donated to a transplant chain and so the total number of recipients benefitting from the NDADs was 131. In 2025 there were 65 NDADs and of those 24 (37%) donated to a transplant chain and so the total number of recipients benefitting from the NDADs was 105.

**Table 1** – NDAD activity by method of donation, and total recipients benefitting from NDAD kidneys

Year	Tier A	NDAD Starting Chain	Unmatched in UKLKSS	Total NDADs	Additional Recipients benefitting from Tx	Total Recipients benefitting from Tx
2020	8 (18%)	28 (64%)	8 (18%)	44	40	84
2021	13 (21%)	36 (58%)	13 (21%)	62	59	121
2022	15 (21%)	41 (58%)	15 (21%)	71	60	131
2023	7 (11%)	42 (67%)	14 (22%)	63	66	129
2024	21 (42%)	25 (50%)	4 (8%)	50	44	94
2025	26 (40%)	24 (37%)	15 (23%)	65	40	105

Note: Tx=Transplant

7. Table 2 shows the age and blood group of NDADs and end of chain donors by the type of donor. The median age of donors ranges from 48 in NDADs starting chains to 56 in NDADs who were unmatched in the UKLKSS. Most donors were blood group O in NDADs donating to Tier A recipients and those starting chains, whereas most donors were blood group A in end of chain donors and NDADs who were unmatched in the UKLKSS.

**Table 2– Donor demographics by type of donation**

Type of donation		N	Median	Q1	Q3
<b>Donor age</b>	Tier A	90	50	37	62
	NDAD Starting Chain	196	48	33	59
	End of Chain	196	54	42	62
	Unmatched in UKLKSS	69	56	46	62
<b>Donor blood group</b>	<b>Type of donation</b>	<b>O</b>	<b>A</b>	<b>B</b>	<b>AB</b>
	Tier A	69 (77%)	16 (18%)	5 (6%)	0 (0%)
	NDAD Starting Chain	98 (50%)	76 (39%)	21 (11%)	1 (1%)
	End of Chain	11 (6%)	121 (62%)	35 (18%)	29 (15%)
	Unmatched in UKLKSS	10 (14%)	41 (59%)	6 (9%)	12 (17%)

Q1 and Q3 gives the 25<sup>th</sup> and 75<sup>th</sup> percentiles respectively, with 25% of observations lying below (Q1) and 25% lying above (Q3) these values when ranked in order of size

8. Table 3 shows the age, sensitisation, waiting times and blood groups of recipients by the type of donation. The ages of recipients were similar between all donor types. Recipients in Tier A receiving an NDAD transplant were more highly sensitised and had a longer average waiting time than other recipients analysed. Of the recipients in Tier A receiving NDAD kidneys, 48% were blood group O and 21% were blood group B. Of the recipients receiving a transplant from an end of chain donor, 6% were blood group O and 18% were blood group B.

**Table 3** – Recipient demographics by type of donation

	Type of donation	N	Median	Q1	Q3				
<b>Recipient age</b>	Tier A	90	49	39	56				
	NDAD Starting Chain	196	49	37	59				
	End of Chain	196	51	39	60				
	Unmatched in UKLKSS	69	51	39	65				
<b>Sensitisation</b>	Tier A	90	93	56	99				
	NDAD Starting Chain	196	2	0	57				
	End of Chain	196	0	0	65				
	Unmatched in UKLKSS	69	0	0	68				
<b>Waiting Time Points (days)</b>	Tier A	90	1826	413	3085				
	NDAD Starting Chain	171	469	184	808				
	End of Chain	196	963	558	1416				
	Unmatched in UKLKSS	69	1057	556	1762				
<b>Recipient blood group</b>	<b>Type of donation</b>	<b>O</b>		<b>A</b>		<b>B</b>		<b>AB</b>	
		Tier A	43 (48%)	27 (30%)	19 (21%)	1 (1%)			
		NDAD Starting Chain	98 (50%)	73 (37%)	21 (11%)	4 (2%)			
		End of Chain	11 (6%)	111 (57%)	35 (18%)	39 (20%)			
		Unmatched in UKLKSS	8 (12%)	41 (59%)	7 (10%)	13 (19%)			

Q1 and Q3 gives the 25<sup>th</sup> and 75<sup>th</sup> percentiles respectively, with 25% of observations lying below (Q1) and 25% lying above (Q3) these values when ranked in order of size

## SUMMARY

9. NDADs who match with and donate to Tier A recipients has increased from 11% in 2023, to 40% in 2025. This has resulted in fewer donations to a transplant chain, each of would result in 2 or 3 transplants. However, those donations to Tier A recipients result in more highly sensitised recipients receiving a transplant.

**OPTIONS**

10. I) Continue to offer NDADs to Tier A recipients before including in UKLKSS matching runs
- II) NDADs are included in UKLKSS matching runs before offering to the transplant list (ie. No matching with Tier A prior to the UKLKSS matching run)
- III) Offer NDADs to Tier A recipients before including in the UKLKSS for selected matching runs only (eg. January and July runs).

**ACTIONS**

11. Members are asked to vote for preferred options in future offering of NDADs

**Matthew Robb, Jen Lumsdaine and Lisa Burnapp**

**January 2026**