

**NHS BLOOD AND TRANSPLANT
ORGAN & TISSUE DONATION AND TRANSPLANTATION DIRECTORATE
KIDNEY ADVISORY GROUP**

**INVESTIGATING ETHNICITY DIFFERENCES IN ACCESS TO
TRANSPLANTATION**

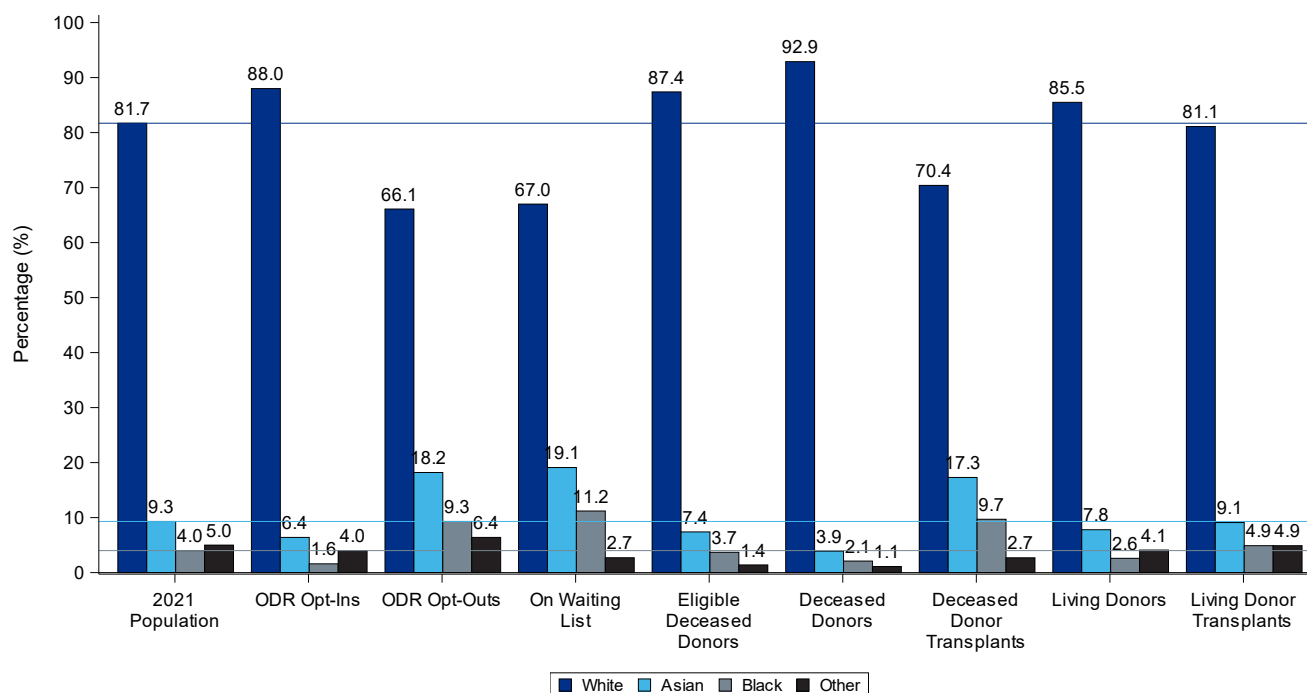
LAY SUMMARY

End stage kidney failure is more common in patients of Black and South Asian ethnicity. This report examines differences in access to kidney transplantation across ethnic groups in the UK and found that patients from Black and Asian backgrounds continue to experience longer waiting times than white patients, despite improvements since the introduction of the new kidney allocation system in 2019. Patients with blood group B, which is more common among some ethnic minority groups, also faced substantially longer waits for a transplant. The analysis showed that patients of black ethnicity had the lowest pre-emptive listing rates and the lowest rates of pre-emptive transplantation, with notable variation in pre-emptive listing rates across centres. The findings suggest that both ethnicity and blood group contribute to ongoing inequalities in access to kidney transplantation.

INTRODUCTION

- 1 Although kidney waiting times have improved for all ethnicities over the past decade, Black and Asian patients continue to wait longer than white patients. This paper investigates differences in waiting times among ethnic minority groups and looks at commonly reported metrics split by ethnicity.
- 2 **Figure 1** shows an over-representation of people from ethnic minority backgrounds, relative to the population of England and Wales, for ODR opt-outs, those on the waiting list and deceased donor transplants. Ethnic minority groups are under-represented in terms of those registering an opt-in decision on the ODR, living donors, eligible and actual deceased donors. The lines on the graph compare each category to the rate in the 2021 general population.

Figure 1 Percentages by ethnicity relative to the population, 1 April 2024 – 31 March 2025



- 3 **Table 1** shows the blood group proportions for patients on the kidney only waiting list, deceased kidney donors and deceased donor kidney transplant recipients between 1 April 2019 – 31 March 2022, along with the blood groups of the UK population. Compared to the population, blood group B patients are over-represented on the waiting list.

Table 1 Percentages by blood group relative to the population, 1 April 2019 - 31 March 2022				
Blood group	Population			
	UK (2026)	Waiting List	Donors	Transplant recipients
	%	%	%	%
O	48	45	51	40
A	40	36	37	43
B	10	15	10	12
AB	3	4	2	5

- 4 **Table 2** presents data on the blood groups of adults registered for kidney only transplants in the UK between 1 April 2019 and 31 March 2022. This shows a higher proportion of blood group B patients of Black and Asian ethnicity.

Table 2 Adults registered for kidney only transplant in the UK, 1 April 2019 - 31 March 2022										
Blood group	Ethnicity									
	White		Asian		Black		Other		Total	
	N	%	N	%	N	%	N	%	N	%
O	2541	46.8	555	36.0	461	50.9	120	39.5	3677	45.0
A	2231	41.1	394	25.5	219	24.2	98	32.2	2942	72.7
B	473	8.7	486	31.5	196	21.7	64	21.1	1219	14.9
AB	181	3.3	108	7.0	29	3.2	22	7.2	340	4.2
Total	5426		1543		905		304		8178	

DATA AND METHODS

- 5 Data were obtained from the UK Transplant Registry on adult patients registered for a kidney only transplant in the UK, between 1 April 2019 and 31 March 2025.
- 6 Survival analyses were used to calculate the active and total median waiting times for each ethnicity. Active waiting time is defined as the time between active registration and transplantation, excluding any periods of suspension. This does not include time on dialysis prior to activation. Total waiting time is defined as the time between starting permanent dialysis (HD or PD) or first active registration, whichever is earliest, and transplantation, and includes periods of suspension. Patients who were still waiting for a transplant and patients who had been removed or died on the list at the time of analysis were censored in the analysis.

RESULTS

Active time from registration to transplant

- 7 **Figures 2, 3 and 4 and Table 2** present the median active waiting time to deceased donor transplant for adults registered on the kidney only transplant list between 1 April 2019 and 31 March 2022 by ethnicity, blood group and match points band. The median active waiting time in the UK was 502 days. The median active waiting times ranged from 466 days for patients of white ethnicity to 585 days for patients of Asian ethnicity. There is wider variation in the median active waiting times by blood group, ranging from 162 days for blood group AB patients to 935 for blood group B patients. By match point band, the median active waiting times are similar across the groups, ranging from 452 days for easy to match patients to 584 for moderate to match patients.

Figure 2 Median active waiting time to deceased donor transplant for adults registered on the kidney transplant list by ethnicity, 1 April 2019 – 31 March 2022

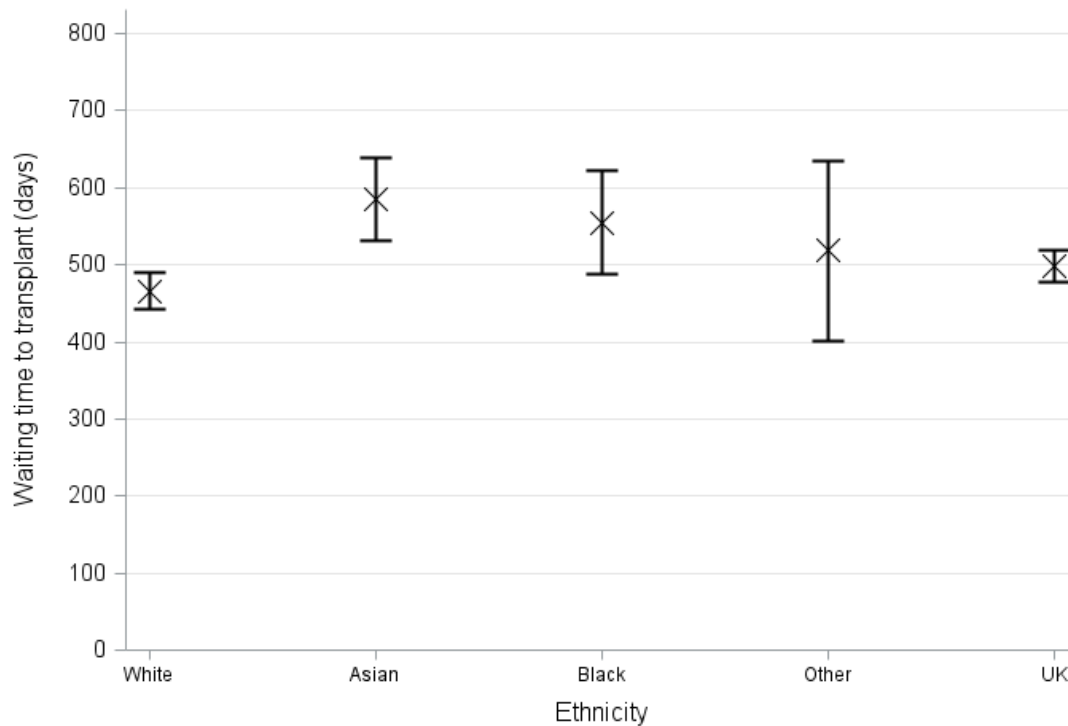


Figure 3 Median active waiting time to deceased donor transplant for adults registered on the kidney transplant list by blood group, 1 April 2019 – 31 March 2022

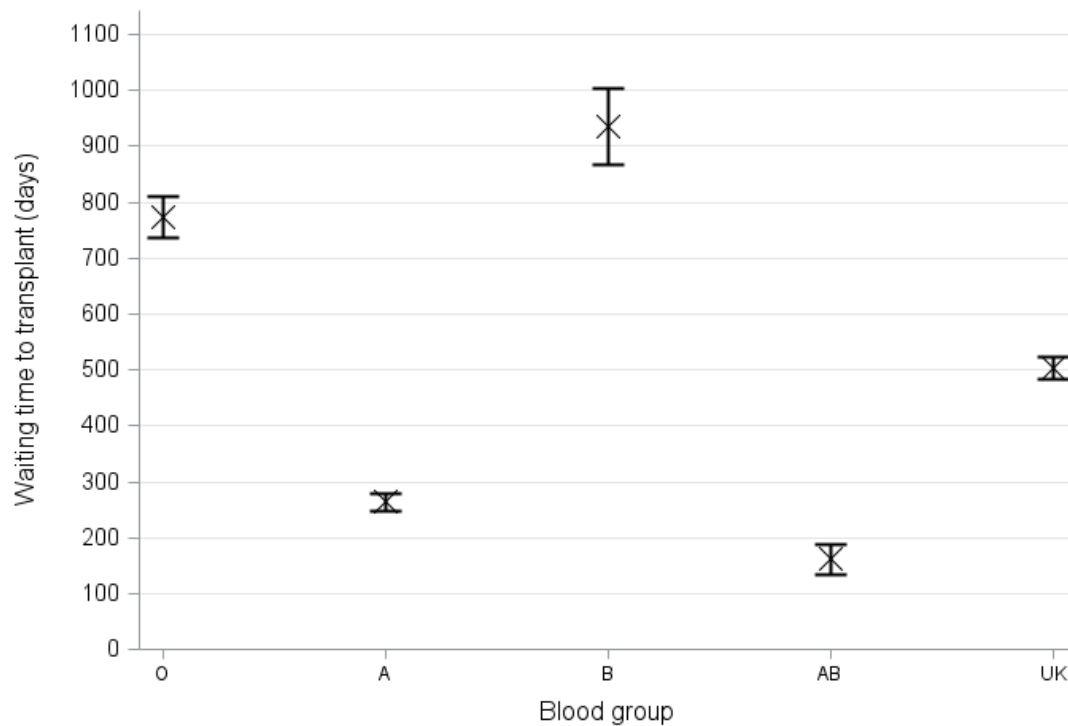


Figure 4 Median active waiting time to deceased donor transplant for adults registered on the kidney transplant list by match points band, 1 April 2019 – 31 March 2022

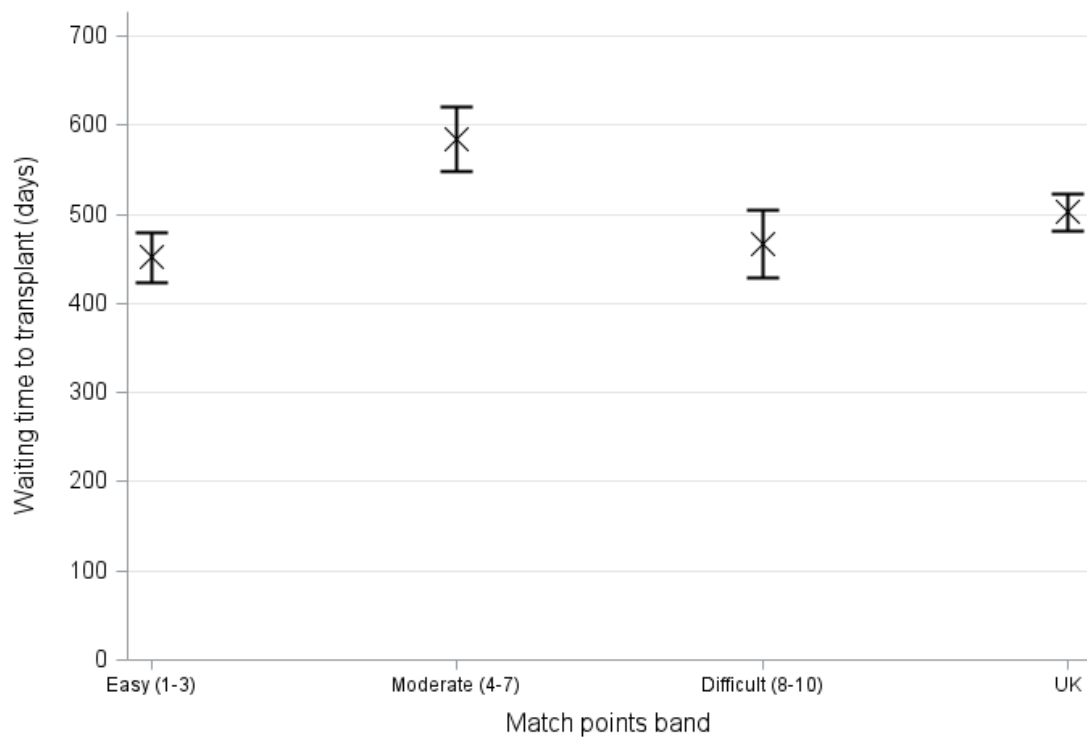


Table 2 Median active waiting time to kidney only transplant in the UK, for adults registered 1 April 2019 - 31 March 2022

Ethnicity	Number of patients registered	Waiting time (days)	
		Unadjusted Median	95% Confidence interval
White	5426	466	443 - 489
Asian	1543	585	532 - 638
Black	905	555	488 - 622
Other	304	518	401 - 635
Missing	168		
AB	346	162	135 - 189
A	3008	264	248 - 280
O	3736	773	737 - 809
B	1256	935	866 - 1004
Easy (1-3)	2934	452	424 - 480
Moderate (4-7)	3334	584	548 - 620
Difficult (8-10)	2059	466	428 - 504
UK	8346	502	482 - 522

Total time from registration to transplant

- 8 **Figures 5, 6 and 7 and Table 3** present the median total waiting time to deceased donor transplant for adults registered on the kidney only transplant list between 1 April 2019 and 31 March 2022 by ethnicity, blood group and match points band. The median total waiting time in the UK was 1169 days. Total waiting time ranged from 1104 days for patients of white ethnicity to 1464 days for patients of black ethnicity. There is wider variation in the median total waiting time by blood group, ranging from 601 days for blood group AB patients to 1629 for blood group B patients. By match point band, the median total waiting times range from 1052 days for difficult to match patients to 1334 for moderate to match patients.

Figure 5 Median total waiting time to deceased donor transplant for adults registered on the kidney transplant list by ethnicity, 1 April 2019 – 31 March 2022

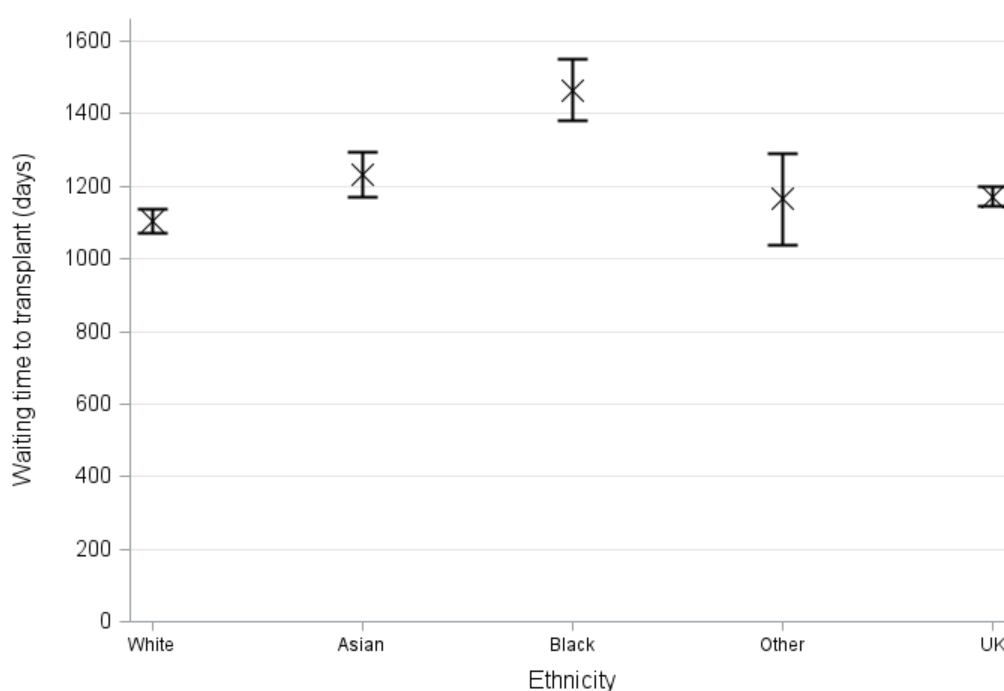


Figure 6 Median total waiting time to deceased donor transplant for adults registered on the kidney transplant list by blood group, 1 April 2019 – 31 March 2022

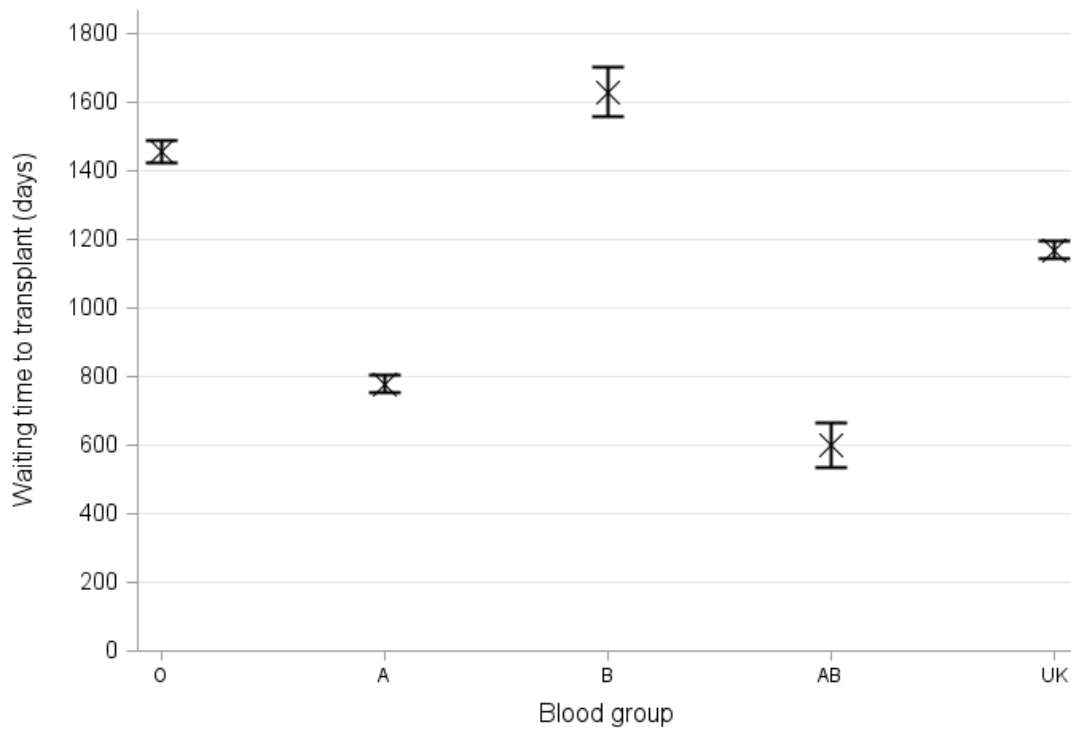


Figure 7 Median total waiting time to deceased donor transplant for adults registered on the kidney transplant list by match points band, 1 April 2019 – 31 March 2022

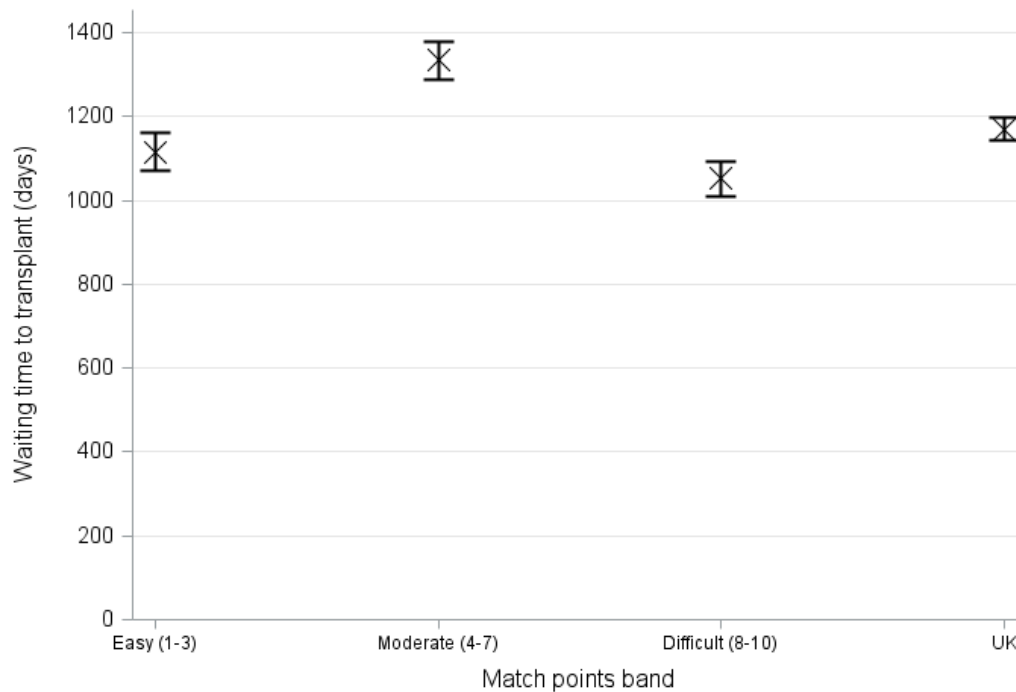


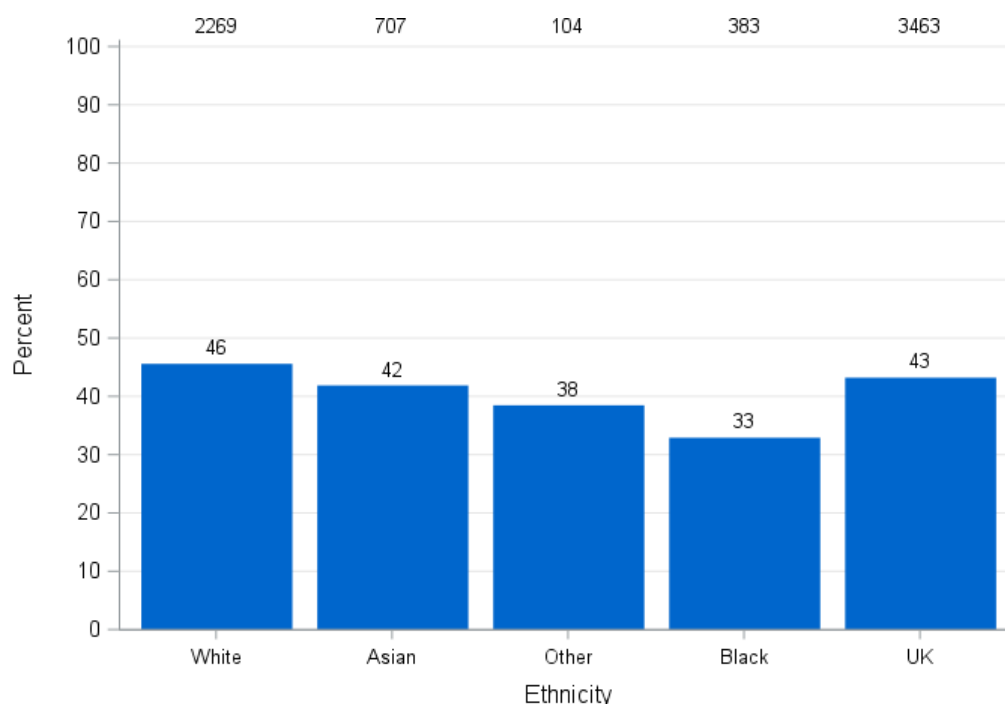
Table 3 Median total waiting time¹ to kidney only transplant in the UK by ethnicity, for adults registered 1 April 2019 – 31 March 2022			
Ethnicity	Number of patients registered	Waiting time (days)	
		Unadjusted Median	95% Confidence interval
White	5415	1104	1071 - 1137
Asian	1541	1232	1169 - 1295
Black	903	1464	1379 - 1549
Other	303	1164	1037 - 1291
Missing	167		
AB	346	601	535 - 667
A	3004	779	754 - 804
O	3723	1456	1423 - 1489
B	1256	1629	1556 - 1702
Easy (1-3)	2792	1116	1070 - 1162
Moderate (4-7)	3125	1334	1289 - 1379
Difficult (8-10)	2380	1052	1010 - 1094
UK	8329	1169	1143 - 1195

¹ Total waiting time includes dialysis and periods of suspension
 Recipients who were not active for more than 1 day are excluded from this analysis.

Pre-emptive kidney only listing rates

- 9 **Figure 8** shows the pre-emptive kidney only listing rates for adults joining the list between 1 April 2023 and 31 March 2024, split by ethnicity. The UK pre-emptive listing rate was 43%. Patients of white ethnicity had the highest pre-emptive listing rate at 46%, whilst patients of black ethnicity had the lowest rate at 33%. **Appendix 1** and **2** show pre-emptive listings broken down by centre for each ethnicity.

Figure 8 Adult pre-emptive listing rates by ethnicity, registrations between 01 April 2023 and 31 March 2024



Pre-emptive kidney only transplant rates

- 10 Rates of pre-emptive kidney only transplantation by ethnicity are shown in **Figure 9** for adult deceased donor transplants and **Figure 10** for adult living donor transplants. Pre-emptive transplant rates for deceased donor transplants are similar across ethnicity groups, with the lowest rate of 11% for patients of black ethnicity. Differences in pre-emptive transplant rates are more apparent in living donor transplants, where patients of white ethnicity have the highest rate whilst patients of black ethnicity have the lowest, 39% and 18%, respectively. **Appendix 3** and **4** present pre-emptive deceased donor transplant rates broken down by centre for each ethnicity. **Appendix 5** presents pre-emptive living donor transplant rates for patients of white ethnicity broken down by centre; no centre had more than 10 pre-emptive living transplants for ethnicities other than white.

Figure 9 Adult pre-emptive deceased transplant rates by ethnicity, registrations between 01 April 2024 and 31 March 2025

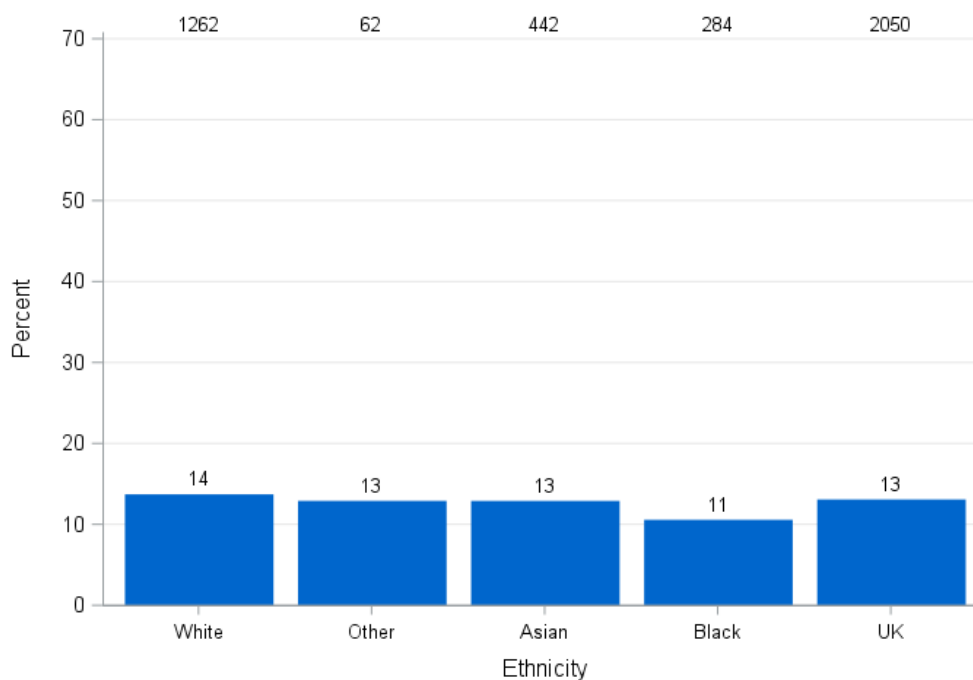
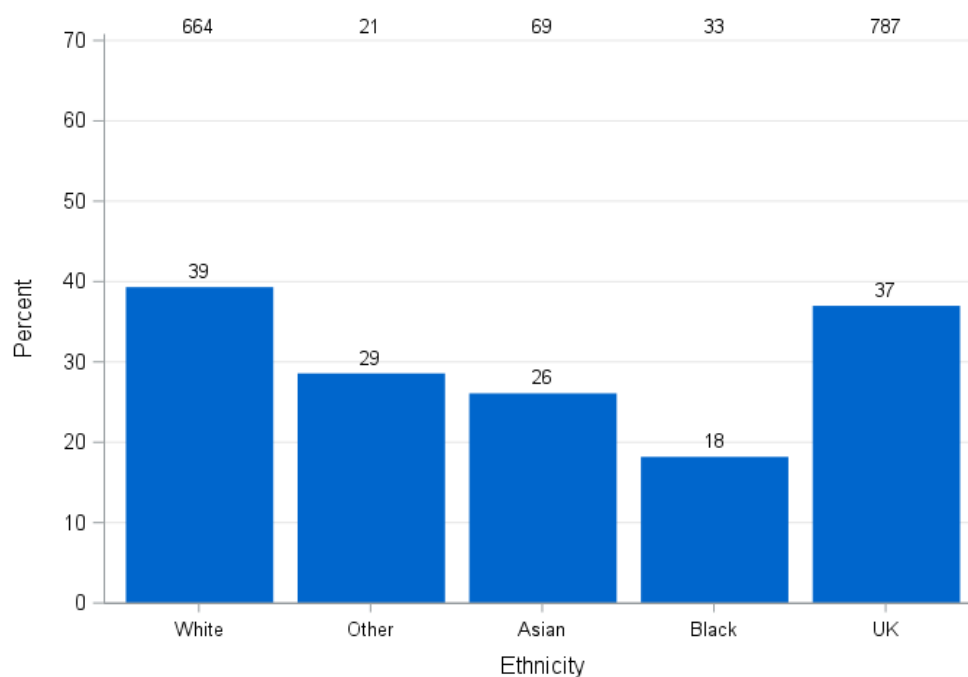


Figure 10 Adult pre-emptive living transplant rates by ethnicity, registrations between 01 April 2024 and 31 March 2025



CONCLUSION

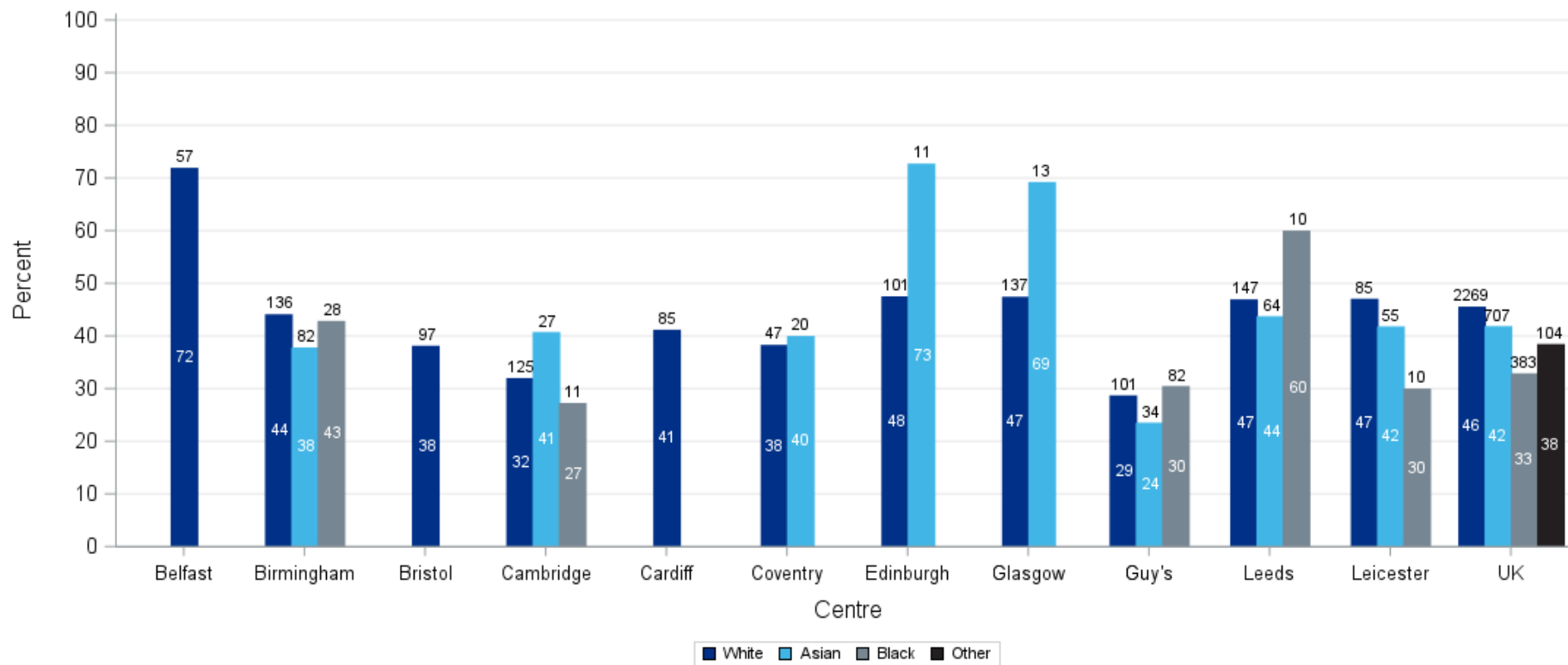
- 11 Although the 2019 KOS has reduced disparities in waiting times across ethnic groups, inequities remain with variation in waiting times across blood groups and pre-emptive listing rates across all centres.
- 12 Patients of black ethnicity have the lowest pre-emptive listing and transplantation rate.

- 13 This analysis highlights that factors beyond ethnic variations in HLA type, such as blood group, may also play a significant role in access to transplantation and should be considered when aiming to improve access to transplantation for all recipients.
- 14 Although the 2019 KOS has significantly reduced disparities across match point bands, improvements in waiting times between ethnic groups remain limited.

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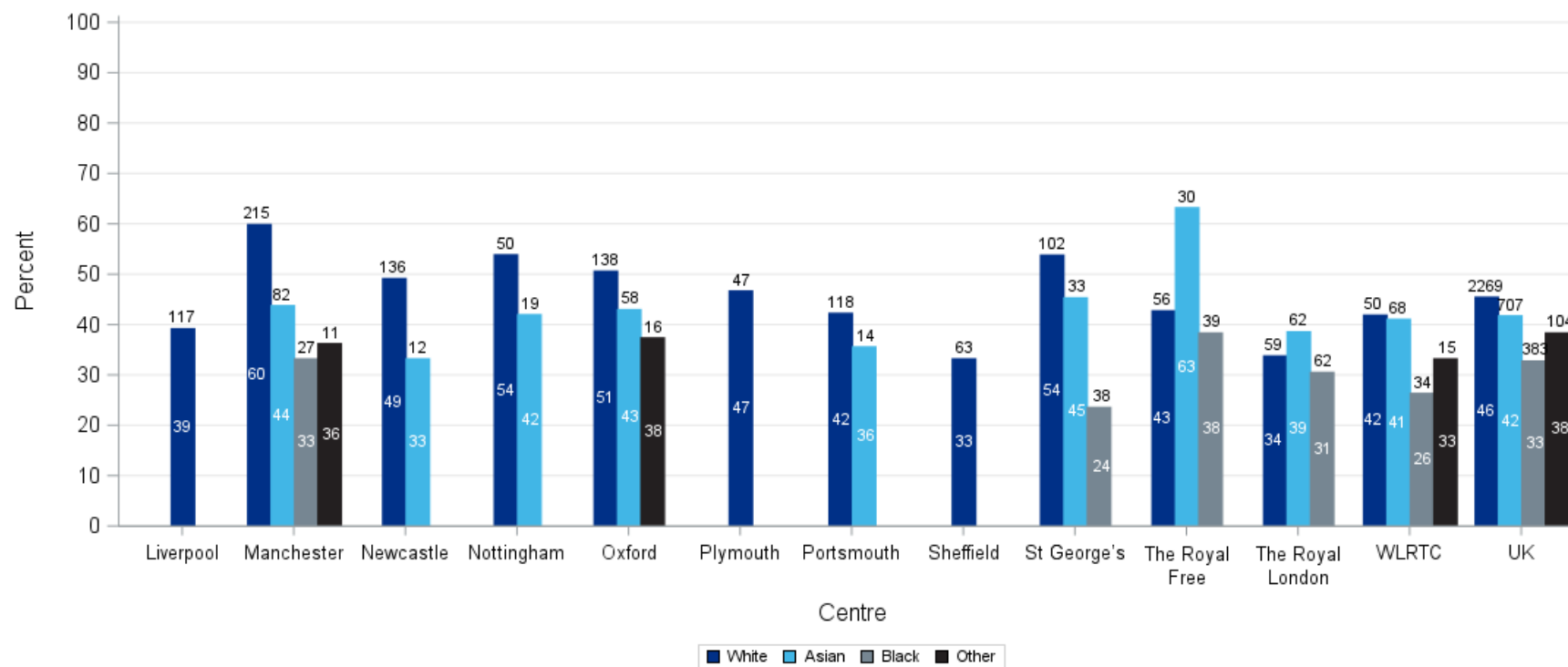
June 2026

Appendix 1 Adult pre-emptive listing rates by ethnicity and centre, registrations between 01 April 2023 and 31 March 2024



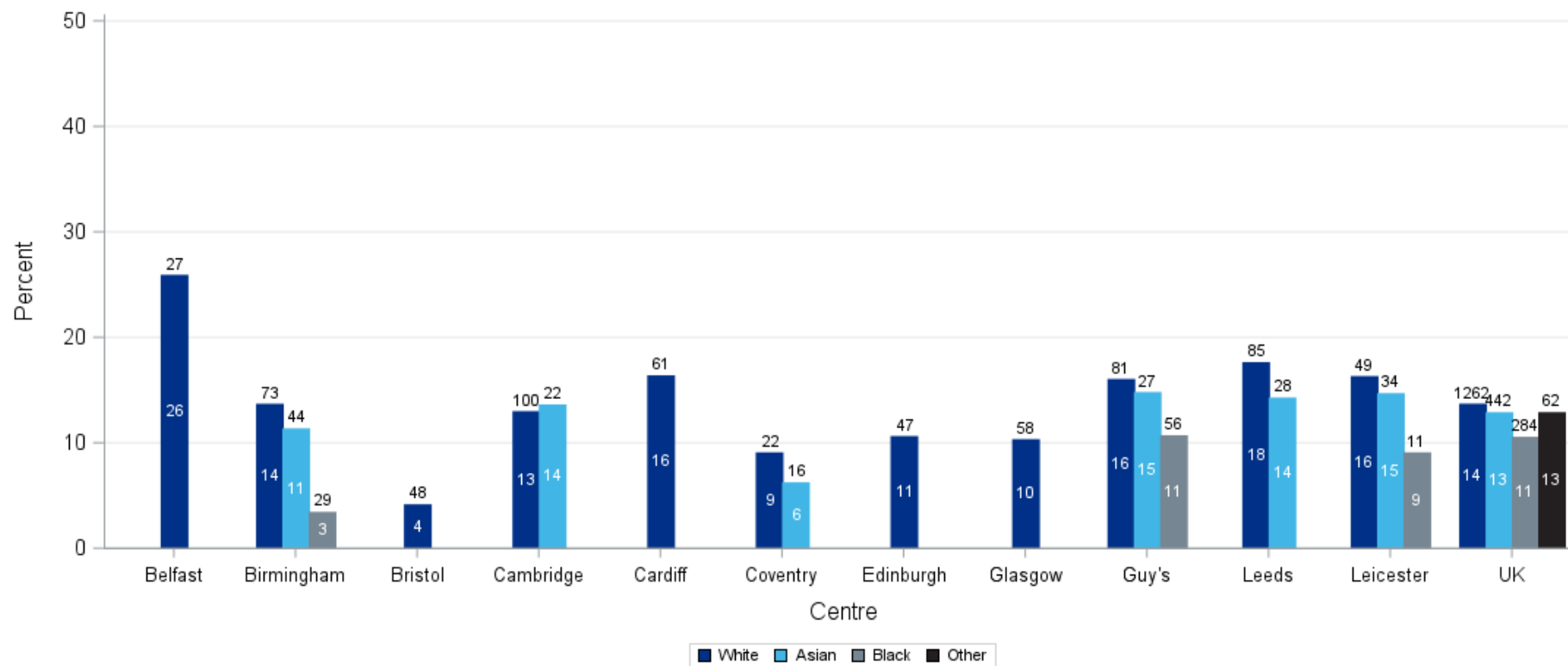
*Centres have been omitted where less than 10 registrations

Appendix 2 Adult pre-emptive listing rates by ethnicity and centre, registrations between 01 April 2023 and 31 March 2024



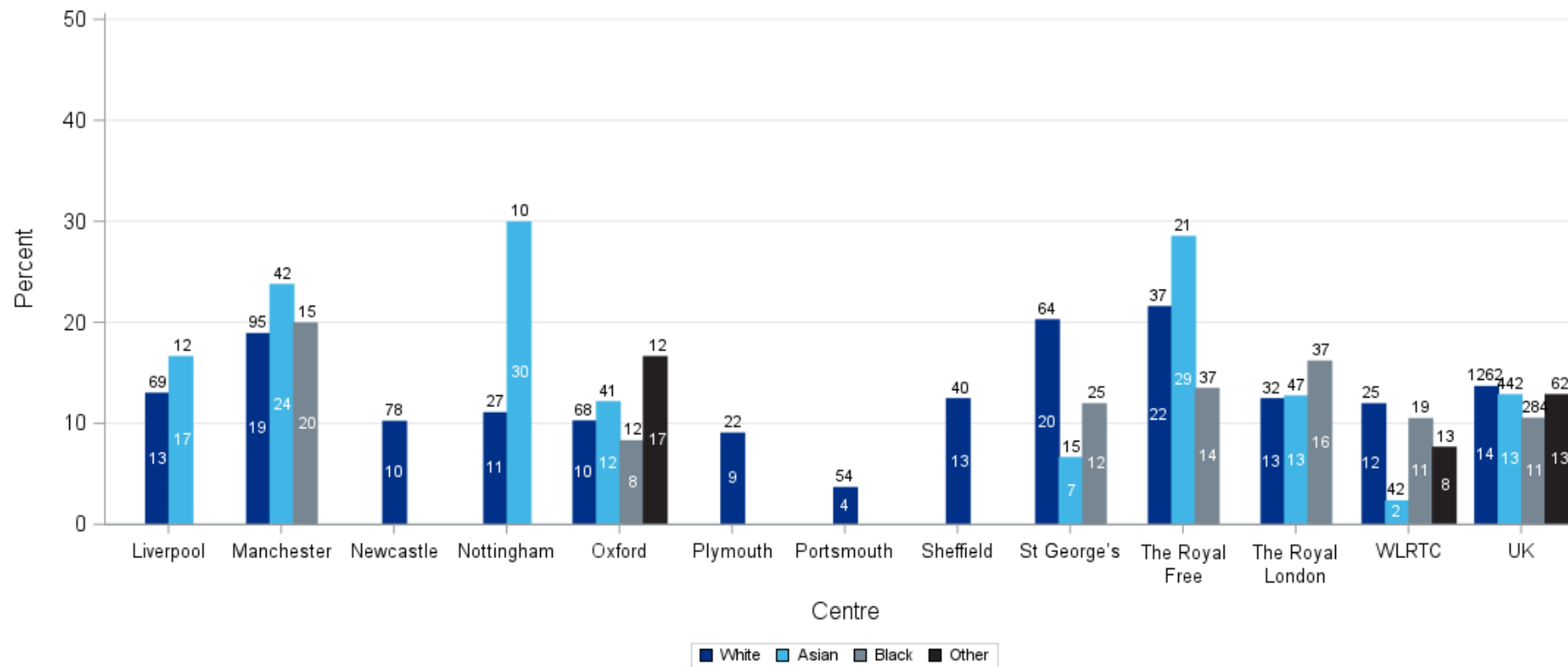
*Centres have been omitted where less than 10 registrations

Appendix 3 Adult pre-emptive deceased donor transplant rates by ethnicity and centre, registrations between 01 April 2024 and 31 March 2025



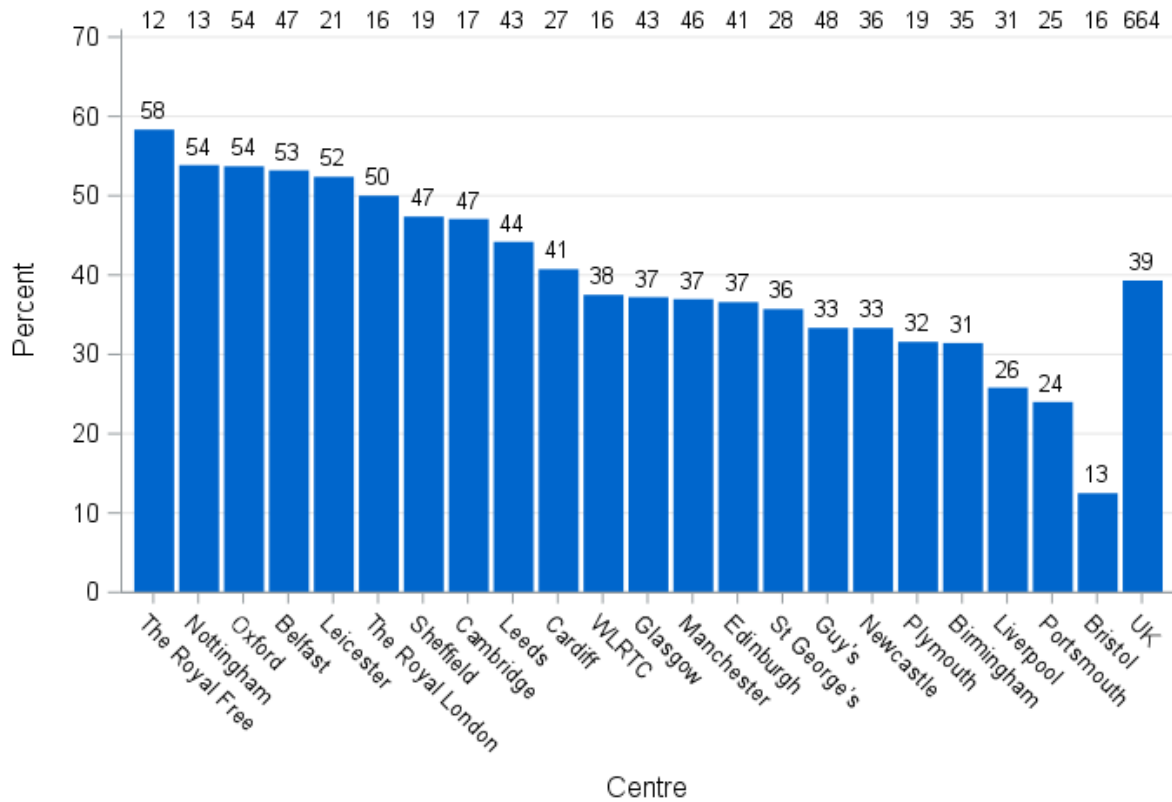
*Centres have been omitted where less than 10 transplants

Appendix 4 Adult pre-emptive deceased donor transplant rates by ethnicity and centre, registrations between 01 April 2024 and 31 March 2025



*Centres have been omitted where less than 10 transplants

Appendix 5 Adult pre-emptive living donor transplant rates by centre, for patients of white ethnicity, registrations between 01 April 2024 and 31 March 2025



*Centres have been omitted where less than 10 transplants