

**Wits Donald Gordon Medical Centre Transplant
Programme**

**Registry of Transplant Recipients Annual Report:
Adult and Paediatric Kidney Transplantation
December 2021**

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Adult Kidney Transplantation

Figure 1: Number of adult kidney transplants per year

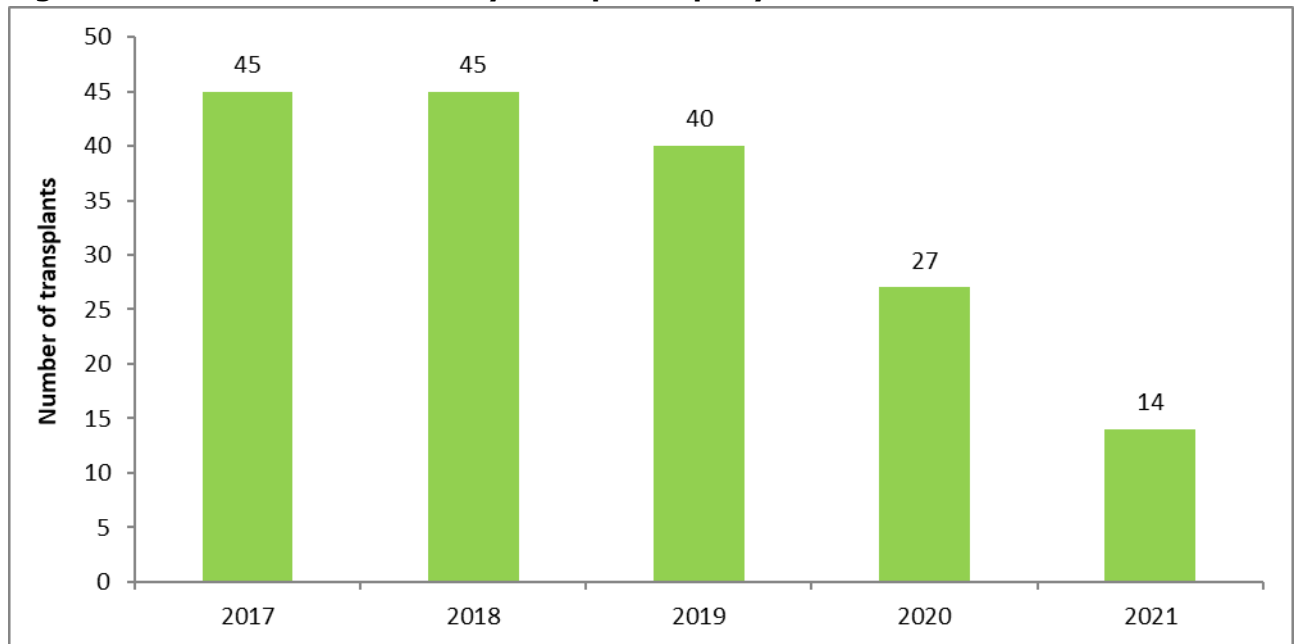


Table 1: Overview of adult kidney transplants

	2017	2018	2019	2020	2021
Number of transplants	45	45	40	27	14
Donor type (n)					
Living donor transplants	17	13	15	8	8
Deceased donor transplants	28	32	25	19	6

Table 2: Adult kidney transplant recipient characteristics

	2017	2018	2019	2020	2021
<i>Number of transplants</i>	45	45	40	27	14
Age (%)					
18-34 years	20	22	20	41	36
35-49 years	51	42	47	30	50
50-64 years	27	29	30	22	7
65 years or older	2	7	3	7	7
Gender (%)					
Male	62	56	60	74	57
Female	38	44	40	26	43
Ethnicity (%)					
Black	40	40	43	37	21
White	38	40	37	48	72
Indian	18	16	15	7	7
East Asian/Chinese	4	4	0	4	0
Mixed	0	0	5	4	0
Unknown	0	0	0	0	0
Transplant history (%)					
First	98	96	88	100	100
Re-transplant	2	4	12	0	0
Blood type (%)					
A			37	48	36
B			13	11	14
AB			7	8	0
O			38	33	50
Unknown			5	0	0
BMI (%)					
< 18.5 kg/m ²			3	7	14
18.5-< 25 kg/m ²			35	41	29
25-< 28 kg/m ²			10	15	29
28-< 30 kg/m ²			22	15	0
30-< 35 kg/m ²			10	15	21
>= 35 kg/m ²			0	0	0
Unknown			20	7	7
Diabetes (%)					
Yes			10	11	21
No			90	89	79
Renal Replacement Therapy modality at the time of listing (%)					
CKD (not yet on dialysis)			5	15	14
Haemodialysis			95	81	86
Peritoneal dialysis			0	4	0

Table 3: Donor characteristics

	2017	2018	2019	2020	2021
<i>Number of transplants</i>	45	45	40	27	14
Blood type (%)					
A			33	52	36
B			7	11	14
AB			5	0	0
O			55	37	50
Donor-recipient blood group compatibility (%)					
ABO compatibility/minor incompatibility			92	96	100
ABO incompatibility-major			8	4	0
Expanded criteria organ (deceased donors only) (%)					
Yes			24	0	17
No			76	100	83
Increased risk organ (%)					
Yes			3	7	7
No			97	89	93
Unknown			0	4	0

Table 4: Donor-Recipient serology matching (2021)

Donor / Recipient	CMV	Hep B core	Hep B surface antigens	Hep C	HIV
D- / R-	CMV	Hep B core	Hep B surface antigens	Hep C	HIV
D- / R+		86	86	100	93
D- / R unknown	15		7		
D+ / R-	7	14	7		
D+ / R+	7				
D+ / R unknown	43				7
D unknown / R-	14				
D unknown / R+					
D unknown / R unknown					

Table 5: Transplant characteristics

	2017	2018	2019	2020	2021
<i>Number of transplants</i>	45	45	40	27	14
Procedure Type (%)					
Kidney alone	98	100	98	96	93
Combined liver kidney transplant	2	0	2	4	7
Median days in hospital after transplant (Kidney alone transplants)	10	11	10	11	12

Table 6: Adult kidney transplant survival

	Patient		Graft	
	Unadjusted	Risk-adjusted	Unadjusted	Risk-adjusted
1-month survival				
<i>Number of transplants</i>	85		85	
Survival estimate (%) (95% CI)	99 (92-100)	98 (91-99)	99 (92-100)	99 (92-100)
1-year survival				
<i>Number of transplants</i>	85		85	
Survival estimate (%) (95% CI)	98 (91-99)	98 (91-99)	95 (88-98)	98 (91-99)
3-year survival:				
<i>Number of transplants</i>	104		104	
Survival estimate (%) (95% CI)	92 (85-96)	94 (87-98)	85 (77-91)	85 (77-91)

All survival estimates are for first transplants and all causes of end-stage kidney disease. One-month and one-year patient and graft survival estimates are based on transplants carried out in the 2.5 years prior to the last 12 months of follow-up, i.e. patients transplanted between 1 Jul 2018 and 31 Dec 2020. Three-year patient and graft survival estimates are based on transplants carried out in the 2.5 years prior to the last 3 years of follow-up, i.e. patients transplanted between 1 Jul 2016 and 31 Dec 2018. Risk-adjusted estimates are based on the observed vs estimated deaths (or graft failures) using a model based on transplant number, recipient age and gender. The 3-year survival curves are shown in Appendix A.

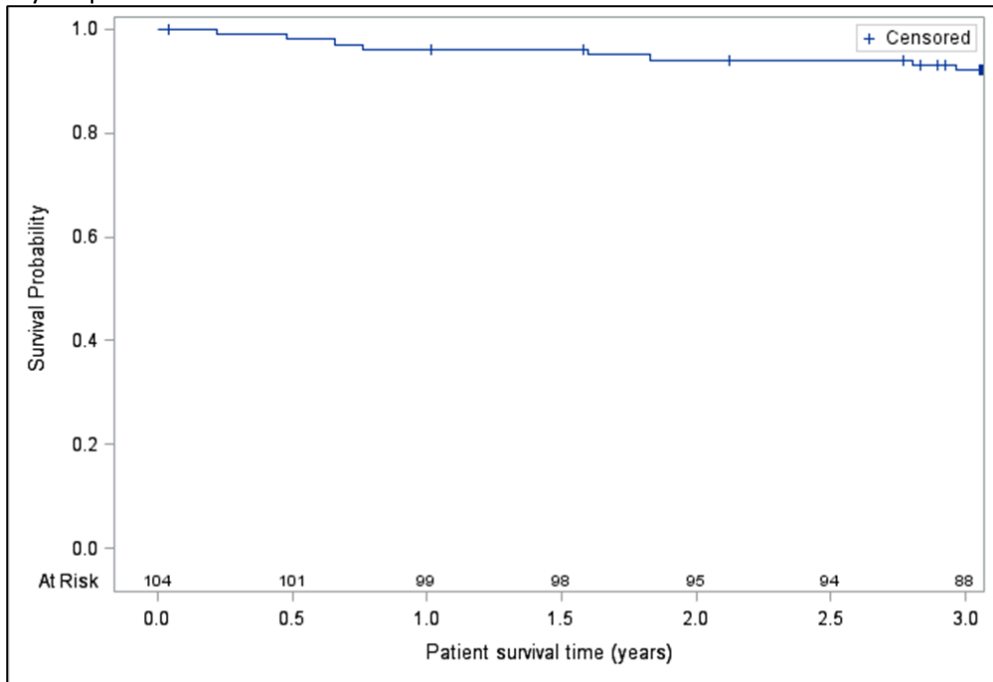
Table 7: 1-year adult kidney transplant survival by selected groups

	Survival (%) (95% CI)	
	Patient	Graft
Recipient ethnicity:		
Black	97 (82-100)	94 (80-99)
White	97 (80-100)	97 (80-100)
Indian	100 (CI not est.)	90 (47-99)
Donor type:		
Living	96 (76-99)	92 (72-98)
Deceased	98 (88-100)	96 (87-99)

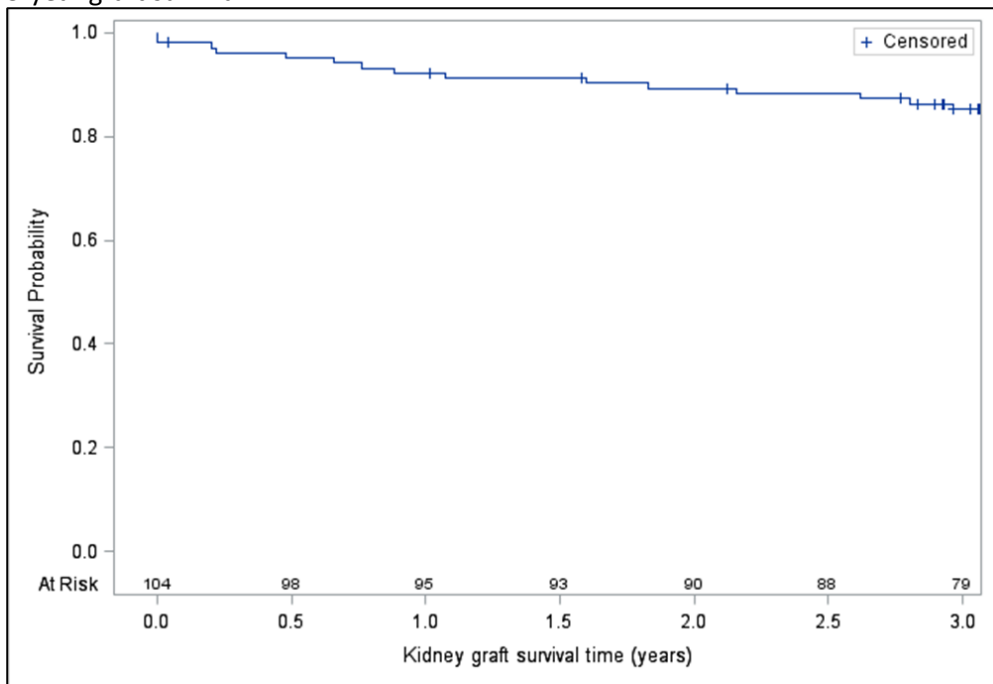
All survival estimates are for first transplants, based on transplants carried out in the 2.5 years prior to the last 12 months of follow-up, i.e. patients transplanted between 1 Jul 2018 and 31 Dec 2020. There were no statistically significant differences in survival between any of the groups. The survival curves are shown in Appendix B.

Appendix A:

3-year patient survival:

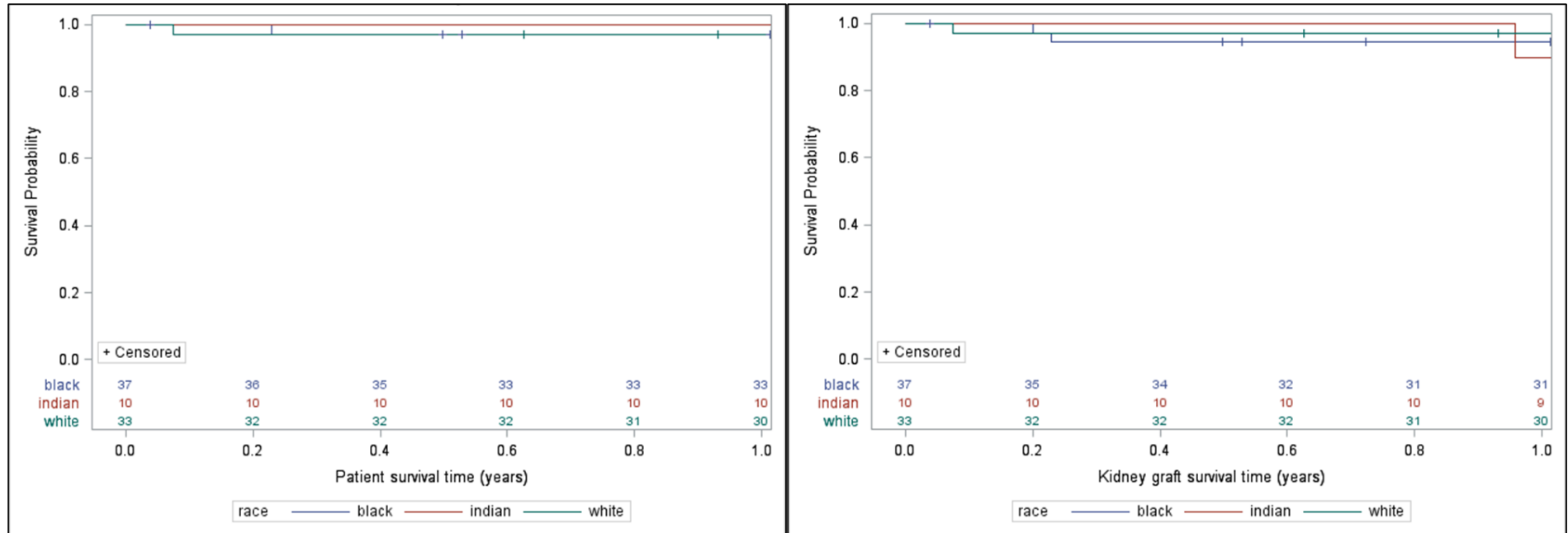


3-year graft survival:

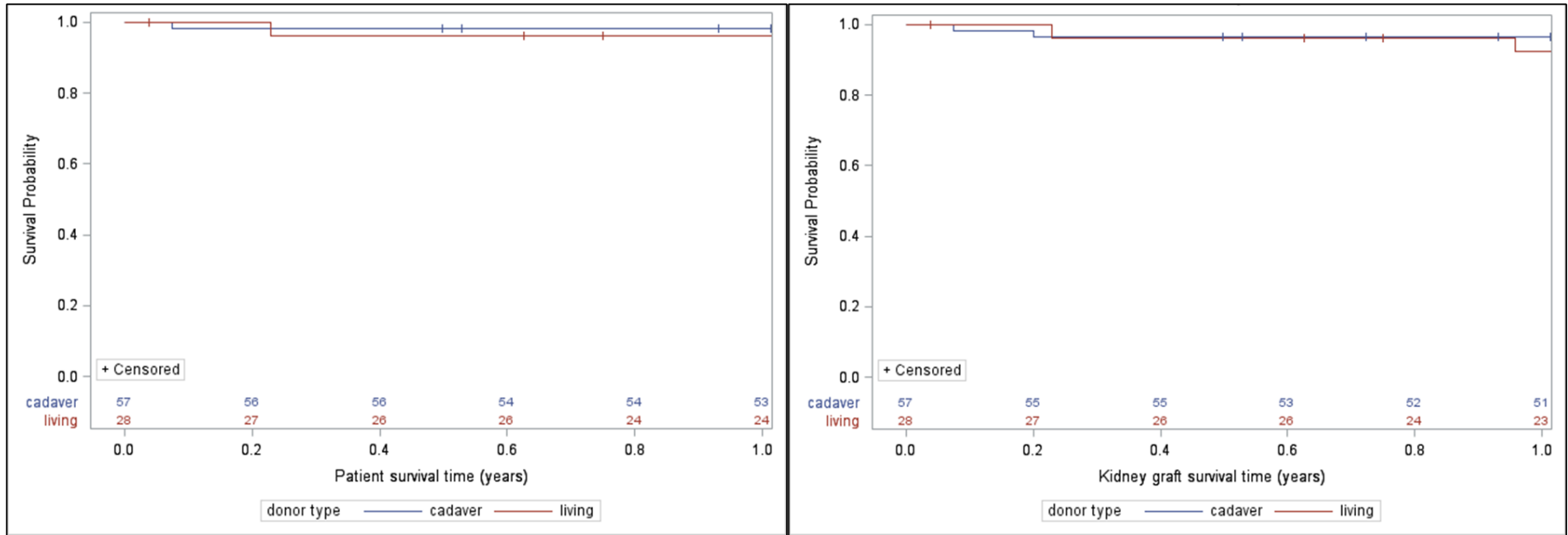


Appendix B:

1-year patient and graft survival by recipient ethnicity:



1-year patient and graft survival by donor type:



Paediatric Kidney Transplantation

Figure 2: Number of paediatric kidney transplants per year

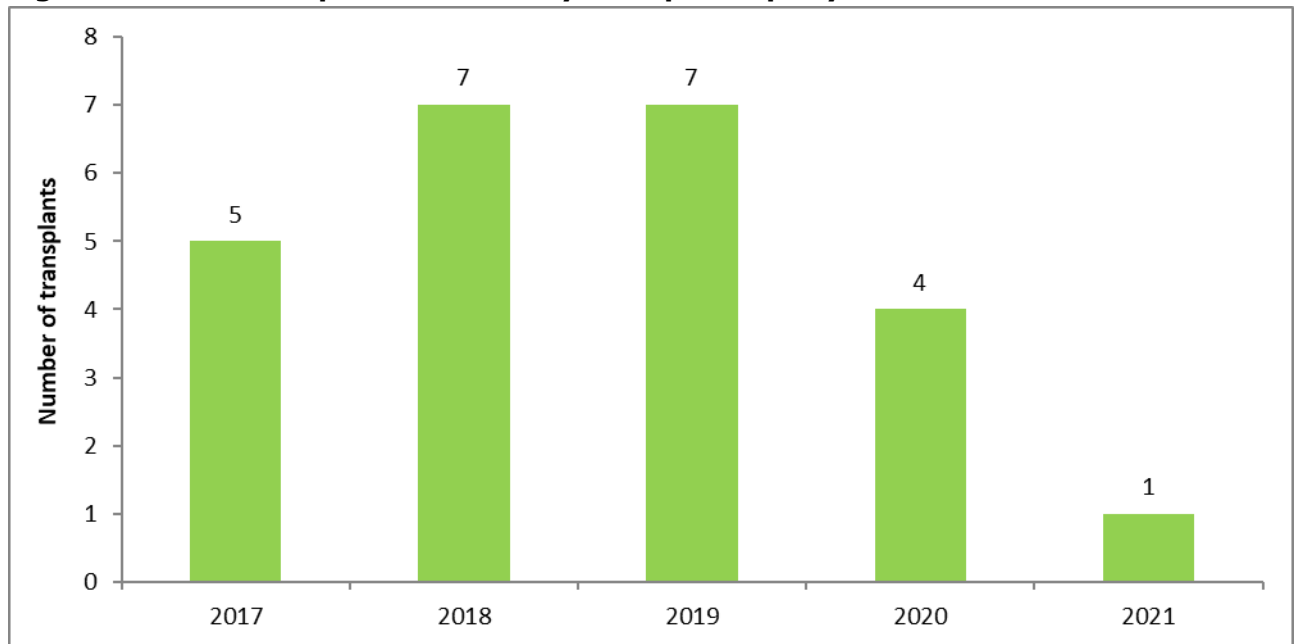


Table 8: Overview of paediatric kidney transplants

	2017	2018	2019	2020	2021
Number of transplants	5	7	7	4	1
Donor type (n)					
Living donor transplants	3	3	1	3	1
Deceased donor transplants	2	4	6	1	0

Since there was only one transplant carried out in 2021, no further details are reported for reasons of identifiability.

Table 9: Paediatric kidney transplant recipient characteristics

	2017	2018	2019	2020	2021
<i>Number of transplants</i>	5	7	7	4	1
Age (%)					
<1 year	0	0	0	0	
1-5 years	20	29	0	25	
6-10 years	20	14	14	25	
11-17 years	60	57	86	50	
Gender (%)					
Male	60	43	43	100	
Female	40	57	57	0	
Ethnicity (%)					
Black	20	29	43	0	
White	80	71	43	75	
Indian	0	0	0	25	
East Asian/Chinese	0	0	14	0	
Mixed	0	0	0	0	
Aetiology of ESRD					
CAKUT	40	86	29	0	
Glomerular disease	60	14	71	0	
Unknown	0	0	0	100	
Transplant history (%)					
First	100	100	100	100	
Re-transplant	0	0	0	0	
Blood type (%)					
A		14	14	0	
B		14	57	25	
AB		0	0	0	
O		57	29	75	
Unknown		15	0	0	
BMI (%)					
< 18.5 kg/m ²		43	43	100	
18.5-< 25 kg/m ²		28	43	0	
25-< 28 kg/m ²		0	0	0	
28-< 30 kg/m ²		0	0	0	
30-< 35 kg/m ²		0	14	0	
>= 35 kg/m ²		0	0	0	
Unknown		29	0	0	

Table 9 (continued)

	2017	2018	2019	2020	2021
Diabetes (%)					
Yes		0	0	0	
No		71	100	100	
Unknown		29	0	0	
Renal Replacement Therapy modality at the time of listing (%)					
CKD (not yet on dialysis)		29	14	50	
Haemodialysis		14	57	0	
Peritoneal dialysis		28	29	50	
Unknown		29	0	0	

Table 10: Paediatric kidney transplant donor characteristics

	2017	2018	2019	2020	2021
<i>Number of transplants</i>	5	7	7	4	1
Blood type (%)					
A		14	14	0	
B		14	57	25	
AB		0	0	0	
O		43	29	75	
Unknown		29	0	0	
Donor-recipient blood group compatibility (%)					
ABO compatibility/minor incompatibility			100	100	
ABO incompatibility-major			0	0	
Expanded criteria organ (deceased donors only) (%)					
Yes		50	17	0	
No		50	83	100	
Increased risk organ (%)					
Yes		0	0	0	
No		86	100	100	
Unknown		14	0	0	

Table 11: Paediatric kidney transplant characteristics

	2017	2018	2019	2020	2021
<i>Number of transplants</i>	5	7	7	4	1
Procedure Type (%)					
Kidney alone	60	71	86	100	
Combined liver kidney transplant	40	29	14	0	
Median days in hospital after transplant (Kidney alone transplants)		5	5	4	

Table 12: Paediatric kidney transplant survival

	Patient	Graft
	Unadjusted	Unadjusted
1-month survival		
<i>Number of transplants</i>	96	96
Survival estimate (%) (95% CI)	98 (92-99)	96 (89-98)
1-year survival		
<i>Number of transplants</i>	96	96
Survival estimate (%) (95% CI)	98 (92-99)	94 (87-97)
3-year survival:		
<i>Number of transplants</i>	84	84
Survival estimate (%) (95% CI)	95 (88-98)	89 (80-94)

All survival estimates are for first transplants and all causes of end-stage kidney disease. One-month and one-year patient and graft survival estimates are based on transplants carried out prior to the last 12 months of follow-up, i.e. patients transplanted between 1 Jan 2004 and 31 Dec 2020. Three-year patient and graft survival estimates are based on transplants carried out prior to the last 3 years of follow-up, i.e. patients transplanted between 1 Jan 2004 and 31 Dec 2018. The 3-year survival curves are shown in Appendix C.

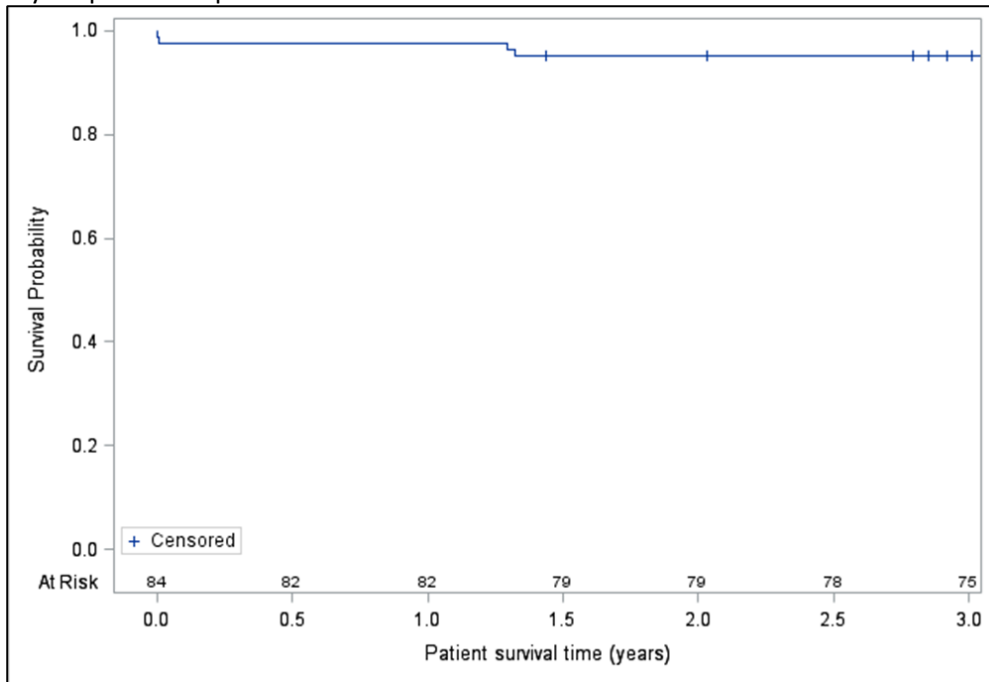
Table 13: 1-year paediatric kidney transplant survival by selected groups

	Survival (%) (95%CI)	
	Patient	Graft
Recipient ethnicity:		
Black	97 (80-99)	97 (80-99)
White	98 (87-99)	94 (83-98)
Donor type:		
Living	100 (-)	96 (85-99)
Deceased	96 (84-99)	91 (78-97)

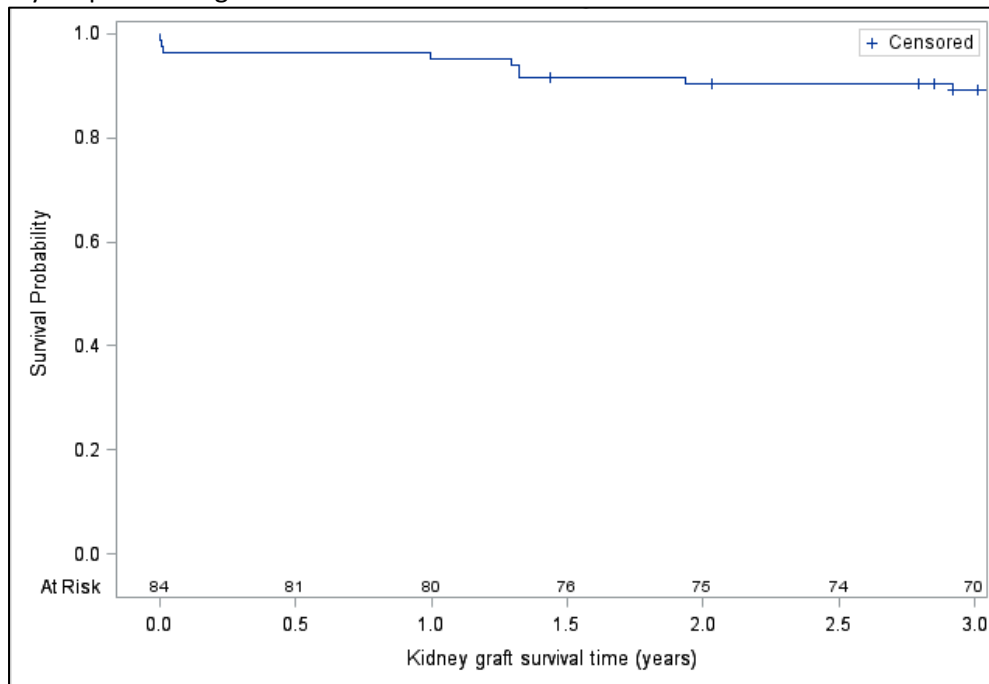
All survival estimates are for first transplants, based on transplants carried out prior to the last 12 months of follow-up, i.e. patients transplanted between 1 Jan 2004 and 31 Dec 2020. There were no statistically significant differences in survival between any of the groups. The survival curves are shown in Appendix D.

Appendix C:

3-year paediatric patient survival:

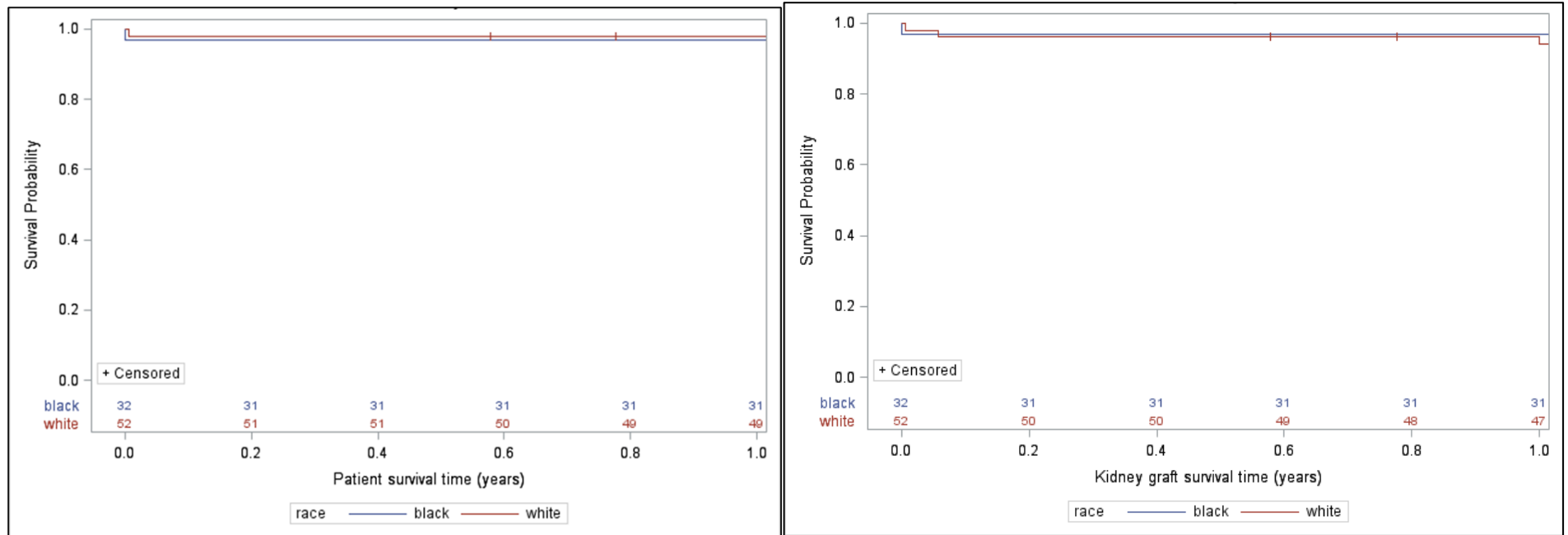


3-year paediatric graft survival:



Appendix B:

1-year paediatric patient and graft survival by recipient ethnicity:



1-year paediatric patient and graft survival by recipient donor type:

