

## Supplementary Tables

Table S1. Failures, death, and dialysis modality changes at the first KRT modality: Australia and New Zealand Registry 2000–2020

<b>Initial KRT Modality (n)</b>	<b>Technique failure or graft failure at first KRT</b>	<b>Death at first KRT modality</b>	<b>First dialysis modality change, then back to the first dialysis modality</b>	<b>KT as the second modality</b>	<b>KT as the &gt;2<sup>nd</sup> modality</b>	<b>Never received KT until end of study period</b>	<b>Died without receiving KT</b>
PD (509)	102	18	46	332	93	84	28
HD (360)	135	11	21	187	114	59	27
KT (189)	41	3	N/A	N/A	N/A	N/A	N/A
Total (1058)	278	32	67	519	207	143	55

*HD*, hemodialysis; *KRT*, kidney replacement therapy; *KT*, kidney transplantation; *N/A*, not available; *PD*, peritoneal dialysis

Table S2. Death rates on the first KRT modality

First KRT Modality	Death Rate (per 100 patient-years)			P comparing decades
	2000–2020	2000–2010	2011–2020	
Overall	1.2 (0.8–1.6)	1.2 (0.8–1.8)	1.1 (0.6–2)	0.9
Dialysis	2.3 (1.6–3.3)*	2.4 (1.5–3.8)*	2.2 (1.2–3.9)*	0.9
Pre-emptive KT	0.2 (0.1–0.6)*	0.3 (0.1–0.9)*	0*	0.2

*KT*, kidney transplantation; *KRT*, kidney replacement therapy

P value comparing pre-emptive KT with dialysis < 0.05

\*statistically significant

Table S3. Cause of death on the first KRT modality among pediatric KRT patients: Australia and New Zealand Registry 2000–2020

Last KRT modality	Cause of death					Total
	Cardiovascular	Withdrawal	Cancer	Infection	Other	
PD	8	0	1	6	3	18
HD	7	1	0	0	3	11
KT	0	0	1	1	1	3
Total	15	1	2	7	7	32

*HD*, hemodialysis; *KRT*, kidney replacement therapy; *KT*, kidney transplantation; *PD*, peritoneal dialysis

Table S4. Comparison of patient survival among children receiving KRT, stratified by the age at KRT initiation: Australia and New Zealand Registry 2000–2020

Follow-up time (years)	Overall patient survival (95% CI)	< 1 year old		1–4 years old		5–9 years old		10–14 years old		15–18 years old	
		N at risk in cohort	Patient survival (95% CI)	N at risk in cohort	Patient survival (95% CI)	N at risk in cohort	Patient survival (95% CI)	N at risk in cohort	Patient survival (95% CI)	N at risk in cohort	Patient survival (95% CI)
0.5	98 (96.9–98.7)	80	89.6 (81–94.5)	159	98.2 (94.4–99.4)	209	99 (96.2–99.8)	279	98.9 (96.7–99.7)	294	98.6 (96.4–99.5)
1	96 (94.6–97.1)	74	79.5 (69–86.7)	152	96.1 (91.6–98.2)	201	97.6 (94.3–99)	267	98.5 (96.2–99.5)	285	97.2 (94.5–98.6)
2	94.4 (92.7–95.7)	60	79.5 (69–86.7)	140	95.3 (90.5–97.8)	188	95.9 (91.9–97.9)	249	97.7 (94.9–99)	265	94.1 (90.5–96.3)
5	91.4 (89.2–93.1)	50	75.4 (63.8–83.8)	106	92.1 (85.4–95.7)	153	94.4 (89.7–97)	197	95.1 (91–97.4)	222	90.1 (85.5–93.3)
10	86.8 (83.7–89.4)	27	75.4 (63.8–83.8)	65	88.3 (79.1–93.6)	99	89.6 (82.4–94)	109	87.1 (79.2–92.2)	146	86.9 (81.2–90.9)
15	85.4 (81.7–88.5)	10	75.4 (63.8–83.8)	30	83.4 (67.9–91.8)	57	86.9 (77–92.7)	50	87.1 (79.2–92.2)	74	86.9 (81.2–90.9)

*KRT*, kidney replacement therapy; *KT*, kidney transplantation; *N/A*, not available

Table S5. Time to death, cause of death, and number of KRT sequences, by age at KRT initiation

Age at KRT Initiation (Years)	Number of Patients	Time to Death (Years) (median (IQR))	Number of KRT Sequences before Death (median (IQR))	Cause of death (n)
< 1	19	1 (0–1)	3 (3–3)	Cardiovascular (10) Infection (septicaemia, respiratory, and UTI) (4) Cerebrovascular (1) Withdrawal (cardiovascular comorbidities, psychosocial reasons, and sclerosing peritonitis) (3) Other (1)
1–4	13	3 (1–9)	4 (4–7)	Cardiovascular (3) Infection (CNS, septicaemia, respiratory, and liver) (6) Cerebrovascular (1) Cancer (leukemia) (1) Other (2)
5–9	15	2 (1–14)	5 (5–10)	Cardiovascular (6) Infection (septicaemia, CNS, and peritonitis) (3) Cerebrovascular (1) Cancer (1) Withdrawal (cerebrovascular comorbid) (1) Other (severe metabolic acidosis and multiple comorbidities) (3)
10–14	17	9 (3–11)	5 (4–8)	Cardiovascular (7) Infection (septicaemia, respiratory, and peritonitis) (4) Cancer (1) Withdrawal (psychosocial) (1) Other (chronic respiratory failure, cachexia, and vehicle accident) (4)
15–18	28	3.5 (1–8)	5 (4–7)	Cardiovascular (14) Infection (septicaemia and pancreatitis) (2) Cerebrovascular (1) Cancer (1) Withdrawal (psychosocial and dialysis-access difficulties) (2) Other (chronic respiratory failure, hepatic failure, multiple organ failure, poorly controlled diabetes, perforation of abdominal viscus, and intra operative air embolism) (8)
P		0.0016	<0.001	

*CNS*, central nervous system; *IQR*, inter quartile range; *KRT*, kidney replacement therapy; *UTI*, urinary tract infection

Table S6. Overall cause of death based on the last KRT modality among pediatric KRT patients: Australia and New Zealand Registry 2000–2020

Death Age (years)	Cause of Death	Last KRT Modality		
		KT	PD	HD
0–4	Cardiovascular	0	10	1
	Infection (UTI, septicaemia, respiratory, liver, CNS)	2	7	0
	Withdrawal (psychosocial reasons, cardiovascular comorbidities, progression of disease)	1	1	1
	Other (multi-organ failure)	0	0	1
5–8	Cardiovascular	0	1	1
	Infection (CNS)	1	0	0
	Cerebrovascular	0	0	2
	Withdrawal (sclerosing peritonitis, cerebrovascular comorbidities)	0	2	0
	Other (severe metabolic acidosis)	1	0	0
9–14	Cardiovascular	0	0	3
	Infection (CNS, septicaemia, peritonitis)	1	4	0
	Cerebrovascular	0	1	0
	Cancer	0	1	0
15–18	Cardiovascular	2	0	7
	Cancer (leukemia)	2	0	0
	Other (multi-organ failure, chronic respiratory failure, poorly controlled diabetes, intra-operative air embolism, and accident)	3	2	1
>18	Cardiovascular	0	1	14
	Infection (septicaemia, respiratory, pancreatitis)	0	2	2
	Cerebrovascular	1	0	0
	Cancer	1	0	0
	Withdrawal (dialysis access difficulties, psychosocial reasons)	0	0	3
	Other (chronic respiratory failure, perforation of abdominal viscus, hepatic failure, cachexia)	1	0	8
	Total	16	32	44

*CNS*, central nervous system; *HD*, hemodialysis; *KRT*, kidney replacement therapy; *KT*, kidney transplantation; *PD*, peritoneal dialysis; *UTI*, urinary tract infection

Table S7. Comparison of patient survival among children receiving PD, HD, and KT on the first KRT modality: Australia and New Zealand Registry 2000–2020

Follow-up time (years)	Overall patient survival (95% CI)	Peritoneal dialysis		Hemodialysis		Log-rank P value (only dialysis)	Pre-emptive KT		Log-rank P value
		N at risk in cohort	Patient survival (95% CI)	N at risk in cohort	Patient survival (95% CI)		N at risk in cohort	Patient survival (95% CI)	
0.5	99.1 (98.1–99.5)	391	98.5 (96.8–99.3)	171	99.5 (96.8–99.9)	0.04	180	100	0.01
1	98.3 (97–99)	275	97.6 (95.5–98.7)	122	98.7 (94.8–99.7)	0.2	172	99.4 (96–99.9)	0.13
2	96.6 (94.6–97.8)	110	94.5 (90.4–96.9)	65	97.5 (92–99.3)	0.3	161	98.8 (95.4–99.7)	0.29
5	95.5 (93–97.1)	22	93.5 (88.8–96.3)	28	93.2 (82.4–97.5)	0.5	124	98.8 (95.4–99.7)	0.25
10	90.3 (85.1–93.8)	5	79.7 (52.7–92.3)	6	62.9 (33.4–82.2)	0.6	67	98.8 (95.4–99.7)	<0.001
15	86.7 (78.2–92)	3	79.7 (52.7–92.3)	3	50.3 (19.6–74.8)	0.7	27	95.7 (82.6–99)	<0.001

*HD*, hemodialysis; *KRT*, kidney replacement therapy; *KT*, kidney transplantation; *PD*, peritoneal dialysis

Table S8. Patient survival among children staying on the first KRT modality, by decade

Period / first KRT modality	Patient survival probability (95% CI)				
	6 months	1 year	2 years	5 years	10 years
2000–2010					
Overall	98.8 (97.2–99.5)	98.5 (96.8–99.4)	96.4 (93.3–98)	94.5 (90.4–96.8)	89.5 (83–93.6)
Peritoneal dialysis	97.7 (94.6–99.1)	97.7 (94.6–99.1)	94.4 (88.1–97.4)	92.5 (84.7–96.5)	79.3 (41.6–94.1)
Hemodialysis	100	100	98.2 (87.6–99.7)	92.2 (76.8–97.5)	65.9 (35.4–84.5)
Kidney transplant	100	98.8 (91.9–99.8)	97.6 (90.8–99.4)	97.6 (90.8–99.4)	97.6 (90.8–99.4)
2011–2020					
Overall	99.3 (97.8–99.8)	98 (95.8–99)	96.9 (93.8–98.4)	96.9 (93.8–98.4)	N/A
Peritoneal dialysis	99.2 (96.7–99.8)	97.4 (93.6–98.9)	94.5 (87.6–97.6)	94.5 (87.6–97.6)	N/A
Hemodialysis	98.9 (92.3–99.8)	96.8 (86.9–99.2)	96.8 (86.9–99.2)	96.8 (86.9–99.2)	N/A
Kidney transplant	1	1	1	1	N/A

*KRT*, kidney replacement therapy; *N/A*, not available



Table S9. Comparison of patient survival among children who commenced dialysis at age < 5 years old and ≥ 5 years old: Australia and New Zealand Registry 2000–2020

Follow-up time (years)	Overall patient survival (aged 0–18 years old) (95% CI)	Commenced dialysis at age < 5 years old		Commenced dialysis at age ≥ 5 years old		Log-rank P value
		N at risk in cohort	Patient survival (95% CI)	N at risk in cohort	Patient survival (95% CI)	
0.5	99.8 (97.6–99.4)	155	96.1 (91.9–98.1)	406	99.8 (98.6–100)	<0.001
1	97.9 (96.4–98.8)	124	95.4 (91.0–97.7)	274	98.8(96.8–99.6)	<0.001
2	95.5 (92.5–97.3)	54	89.4 (81.6–94.0)	121	98.2 (95.5–99.3)	<0.001
5	92.8 (87.5–95.9)	12	89.4 (81.6–94.0)	38	94.4 (86.8–97.7)	<0.001
10	69.2 (48.5–82.9)	2	44.7 (8.5–76.9)	9	76.9 (53.0–89.7)	<0.001
15	61.5 (37.7–78.5)	2	44.7 (8.5–76.9)	4	67.3 (38.4–84.9)	<0.001

Table S10. Patient survival among children aged < 5 years old staying on the first dialysis modality, by decade

Period	Patient survival probability (95% CI)				
	6 months	1 year	2 years	5 years	10 years
2000–2010	94.0 (86.1–97.5)	94.0 (86.1–97.5)	86.4 (73.0–93.4)	86.4 (73.0–93.4)	64.8 (19.4–89.2)
2011–2020	98.0 (92.0–99.5)	96.7 (90.0–98.9)	92.0 (80.5–96.9)	92.0 (80.5–96.9)	N/A
Log rank P value	0.9	0.4	0.2	0.2	0.4

N/A, not available

Table S11. Multivariable Cox proportional hazards analysis of mortality among children receiving dialysis modalities (PD and HD) as the first KRT: Australia and New Zealand Registry 2000–2020

Parameter	Multivariable-adjusted hazard ratio (95% CI) for Australia only	Multivariable-adjusted hazard ratio (95% CI) for Australia and New Zealand
Period		
2011–2020 vs. 2000–2010	1.4 (0.5–4.1)	1.0 (0.4–2.1)
Age at KRT		
0–4 vs. 10–14 years old	10.3 (1.7–64.0)*	11.1 (2.2–56.5)*
5–9 vs. 10–14 years old	1.3 (1.0–16.7)	1.1 (0.1–13.3)
15–18 vs. 10–14 years old	4.2 (0.7–26.3)	4.3 (0.8–21.7)
Gender		
Male vs. female	0.4 (0.1–1.2)	0.8 (0.4–1.8)
Ethnicity		
Asian vs. Caucasian	0.8 (0.2–4.7)	0.6 (0.1–3.0)
ATSI* vs. Caucasian	3.1 (0.7–13.8)	3.6 (0.9–14.3)
<i>Māori</i> vs. Caucasian	19.0 (1.5–239.6)*	3.2 (0.7–13.5)
Pacific Islander vs. Caucasian	2.7 (0.3–27.1)	0.9 (0.1–7.6)
Other vs. Caucasian	1.6 (0.3–8.8)	1.1 (0.2–5.0)
First KRT modality		
Hemodialysis vs. PD	0.7 (0.2–2.6)	1.2 (0.4–3.4)
Primary kidney diseases		
Cystic diseases vs. CAKUT	1.7 (0.4–7.7)	1.2 (0.3–4.8)
Glomerulonephritis vs. CAKUT	0.5 (0.1–2.5)	0.5 (0.2–1.6)
Others vs. CAKUT	0.9 (0.3–3.2)	0.6 (0.2–1.7)
Late referral	1.8 (1.4–2.5)*	1.0 (0.4–2.3)
Parent centre state		
New Zealand vs. Australia		1.2 (0.3–4.1)
Socio economic indexes for Area (IRSAD)		
Quartile 2 vs. quartile 1	0.7 (0.2–2.9)	N/A
Quartile 3 vs. quartile 1	1.5 (0.4–5.9)	N/A
Quartile 4 vs. quartile 1	0.7 (0.1–4.6)	N/A

Accessibility/Remoteness Index of Australia (ARIA),		
Regional vs. major	1.4 (0.4–4.9)	N/A
Remote vs. major	1.8 (0.2–15.6)	N/A

*ATSI*, Aboriginal and Torres Strait Islander; *CAKUT*, congenital anomalies of the kidneys and urinary tract; *HD*, hemodialysis; *KRT*, kidney replacement therapy; *KT*, kidney transplantation; *N/A*, not available; *PD*, peritoneal dialysis

\*statistically significant

Data from New Zealand alone was too limited to be shown separately.

Table S12. Causes of technique failure in children with dialysis as the first KRT modality: Australia and New Zealand Registry 2000–2020

PD	n (102)	HD	n (135)
Recurrent/persistent peritonitis	23	Geography	1
Acute peritonitis	19	Vascular access	3
Tunnel/exit site infection	3	Patient preference	26
Inadequate solute clearance	16	Planned transfer after acute HD	46
Inadequate fluid ultrafiltration	6	Other	3
Dialysate leak	3	No data	56
Catheter block	7		
Hernia	3		
Abdominal pain	1		
Abdominal surgery	4		
Multiple adhesions	1		
Patient preference	4		
Unable to manage self	1		
Other surgery	1		
Hydrothorax	1		
Other	3		
No data	6		

*HD*, hemodialysis; *KRT*, kidney replacement therapy; *PD*, peritoneal dialysis

Table S13. Death-censored technique survival among children receiving dialysis (PD and HD) as the first KRT modality: Australia and New Zealand Registry 2000–2020

Follow-up time (years)	Overall technique survival (95% CI)	PD		HD		Log-rank P value
		N at risk in cohort	Technique survival (95% CI)	N at risk in cohort	Technique survival (95% CI)	
0.5	79.7 (76.7–82.3)	385	91.3 (88.4–93.5)	168	62.7 (57.3–67.7)	<0.001
1	74.9 (71.6–77.9)	266	85.2 (81.3–88.3)	120	60.1 (54.4–65.2)	<0.001
2	65.1 (60.8–69)	102	70.9 (64.9–76)	64	56.8 (50.7–62.4)	<0.001
3	58.5 (53.2–63.4)	42	59.7 (51.3–67.1)	48	54.8 (48.3–60.8)	<0.001
4	52 (45.6–58)	22	47 (36.2–57.1)	36	53.3 (46.4–59.8)	<0.001
5	49.9 (43.1–56.3)	15	41.6 (29.9–52.9)	27	53.3 (46.4–59.8)	<0.001
6	49.9 (43.1–56.3)	12	41.6 (29.9–52.9)	21	53.3 (46.4–59.8)	<0.001
10	42.2 (33.2–51)	1	N/A	5	50.5 (41.9–58.5)	<0.001

*HD*, hemodialysis; *KRT*, kidney replacement therapy; *N/A*, not available; *PD*, peritoneal dialysis

Table S14. Death-censored technique survival among children receiving dialysis (PD and HD) as the first KRT modality, by decade

Period / first KRT modality	Technique survival probability (95% CI)				
	6 months	1 year	2 years	5 years	10 years
2000–2010					
Overall	79.5 (75.3–83.0)	74.1 (69.5–78.2)	62.6 (56.8–68.0)	48.3 (40.5–56.6)	40.0 (29.6–50.1)
Peritoneal dialysis	91.9 (87.5–94.7)	85.7 (80.1–89.8)	67.3 (58.7–74.5)	39.3 (24.9–53.4)	N/A
Hemodialysis	63.6 (56.1–70.1)	59.2 (51.5–66.1)	56.2 (48.2–63.5)	52.6 (43.5–60.9)	49.3 (38.7–59.1)
2011–2020					
Overall	79.9 (75.6–83.5)	75.8 (71.0–80.0)	68.3 (62.0–73.8)	51.2 (39.1–62.0)	N/A
Peritoneal dialysis	90.8 (86.3–93.9)	84.6 (78.9–88.9)	75.2 (66.9–81.7)	45 (25.6–62.6)	N/A
Hemodialysis	61.9 (53.5–69.2)	61.9 (53.5–69.2)	58 (48.2–66.5)	54.9 (43.9–64.6)	N/A

*HD*, hemodialysis; *KRT*, kidney replacement therapy; *N/A*, not available; *PD*, peritoneal dialysis

Table S15. Non-censored for death technique survival among children receiving dialysis (PD and HD) as the first KRT modality: Australia and New Zealand Registry 2000–2020

Follow-up time (years)	Overall technique survival (95% CI)	Peritoneal dialysis (PD)		Hemodialysis (HD)		Log-rank P value
		N at risk in cohort	Technique survival (95% CI)	N at risk in cohort	Technique survival (95% CI)	
0.5	78.7 (75.7–81.4)	385	89.9 (86.8–92.3)	168	62.4 (57–67.4)	<0.001
1	73.3 (70–76.4)	266	83.1 (79.1–86.3)	120	59.3 (53.6–64.5)	<0.001
2	62 (57.7–66.1)	102	66.8 (60.8–72.1)	64	55.4 (49.2–61.1)	<0.001
3	55 (49.7–59.9)	42	55.7 (47.6–63)	48	52.5 (45.8–58.7)	<0.001
4	48.9 (42.7–54.8)	22	43.8 (33.7–53.5)	36	51.1 (44–57.7)	<0.001
5	46.1 (39.5–52.5)	15	38.8 (27.8–49.6)	27	49.6 (42.2–56.6)	<0.001
6	42.3 (35–49.4)	12	35.6 (24.1–47.2)	21	45.5 (36.7–53.8)	<0.001
10	24.2 (13.4–36.7)	1	N/A	5	30.3 (16.7–45.1)	<0.001

*HD*, hemodialysis; *KRT*, kidney replacement therapy; *N/A*, not available; *PD*, peritoneal dialysis



Table S16. Non-censored for death technique survival among children receiving dialysis (PD and HD) as the first KRT modality, by decade

Period / first KRT modality	Technique survival probability (95% CI)				
	6 months	1 year	2 years	5 years	10 years
2000–2010					
Overall	81.4 (77.7–84.5)	76.6 (72.6–80.1)	67 (62.1–71.3)	57.6 (51.9–62.9)	46.4 (39.9–52.6)
Peritoneal dialysis	89.8 (85.1–93)	83.8 (78–88.1)	63.4 (54.7–70.8)	36.2 (22.9–49.7)	N/A
Hemodialysis	63.6 (56.1–70.1)	59.2 (51.5–66.1)	55.2 (47–62.6)	48.4 (38.7–57.3)	31.1 (17.1–46.1)
2011–2020					
Overall	82.9 (79.3–85.9)	78.9 (74.8–82.3)	73.6 (68.8–77.8)	65.8 (59.4–71.4)	N/A
Peritoneal dialysis	90 (85.5–93.2)	82.3 (76.4–86.9)	70.9 (62.3–78)	42.4 (24.2–59.5)	N/A
Hemodialysis	61.2 (52.8–68.5)	59.9 (51.2–67.4)	56.1 (46.3–64.8)	53.1 (42.2–52.9)	N/A

*HD*, hemodialysis; *KRT*, kidney replacement therapy; *N/A*, not available; *PD*, peritoneal dialysis

Table S17. Multivariable Cox proportional hazards analysis of non-censored for death technique failure among children receiving dialysis modalities (PD and HD) as the first KRT: Australia and New Zealand Registry 2000–2020

Parameter	Multivariable-adjusted hazard ratio (95% CI) for Australia only	Multivariable-adjusted hazard ratio (95% CI) for Australia and New Zealand
Period		
2011–2020 vs. 2000–2010	1 (0.7–1.3)	1 (0.8–1.3)
Age at KRT		
5–9 vs. 0–4 years old	1 (0.7–1.6)	1.1 (0.8–1.6)
10–14 vs. 0–4 years old	0.5 (0.4–0.8)*	0.6 (0.4–0.9)*
15–18 vs. 0–4 years old	0.6 (0.4–0.8)*	0.6 (0.4–0.8)*
Gender		
Female vs. male	1.1 (0.8–1.5)	1.2 (0.9–1.5)
Ethnicity		
Asian vs. Caucasian	0.8 (0.5–1.3)	0.8 (0.5–1.2)
ATSI* vs. Caucasian	1 (0.6–1.6)	1.1 (0.7–1.8)
Māori vs. Caucasian	1.5 (0.5–4.9)	1.3 (0.8–2.1)
Pacific Islander vs. Caucasian	0.9 (0.5–1.9)	1.1 (0.7–1.7)
Other vs. Caucasian	1 (0.6–1.6)	1 (0.7–1.6)
First KRT modality		
Hemodialysis vs. PD	2.4 (1.8–3.3)*	2.2 (1.6–2.9)*
Primary kidney diseases		
Cystic diseases vs. CAKUT	0.9 (0.5–1.6)	0.9 (0.5–1.4)
Glomerulonephritis vs. CAKUT	1.7 (1.2–2.4)*	1.5 (1.1–2)*
Others vs. CAKUT	1.1 (0.8–1.6)	1 (0.7–1.3)
Late referral	1.8 (1.4–2.5)*	1.6 (1.3–2.1)*
Parent centre state		
New Zealand vs. Australia		0.8 (0.6–1.2)
Socio economic indexes for Area (IRSAD)		
Quartile 2 vs. quartile 1	0.9 (0.6–1.4)	N/A
Quartile 3 vs. quartile 1	1 (0.6–1.4)	N/A
Quartile 4 vs. quartile 1	0.9 (0.6–1.4)	N/A

Accessibility/Remoteness Index of Australia (ARIA),		
Regional vs. major	1.1 (0.7–1.5)	N/A
Remote vs. major	1.7 (0.8–3.6)	N/A

*ATSI*, Aboriginal and Torres Strait Islander; *CAKUT*, congenital anomalies of the kidneys and urinary tract; *HD*, hemodialysis; *KRT*, kidney replacement therapy; *KT*, kidney transplantation; *N/A*, not available; *PD*, peritoneal dialysis

\*statistically significant

Data from New Zealand alone was too limited to be shown separately.

Table S18. Comparison of death-censored graft survival among children receiving first KT, stratified by the first KRT modality: Australia and New Zealand Registry 2000–2020

Follow-up time (years)	Overall patient survival (95% CI)	Peritoneal dialysis		Hemodialysis		Pre-emptive KT		Log-rank P value
		N at risk in cohort	Patient survival (95% CI)	N at risk in cohort	Patient survival (95% CI)	N at risk in cohort	Patient survival (95% CI)	
0.5	97.4 (96.1–98.2)	404	98.1 (96.3–99.1)	284	96.3 (93.5–97.9)	182	97.4 (93.8–98.9)	N/A
1	96.7 (95.3–97.7)	395	97.6 (95.6–98.7)	277	95.6 (92.6–97.4)	175	96.3 (92.3–98.2)	0.65
5	86.5 (83.9–88.7)	262	87.1 (83.1–90.2)	186	82.4 (77.2–86.5)	129	91.8 (86.5–95.1)	0.03
10	70.7 (66.8–74.2)	130	72.3 (66.4–77.3)	81	62.9 (55.6–69.3)	70	79.4 (71.2–85.6)	0.04
15	53.2 (47.8–58.2)	46	50.6 (42.1–58.4)	29	49.1 (39.9–57.6)	31	64.5 (53.2–73.7)	0.07
20	40.2 (31.1–49.1)	3	27.7 (12.9–44.7)	2	46.3 (36.2–55.9)	8	54.1 (39.1–66.9)	0.05

*KRT*, kidney replacement therapy; *KT*, kidney transplantation; *N/A*, not available

Table S19. Death-censored graft survival among children receiving pre-emptive kidney transplantation, by decade

Period	Technique survival probability (95% CI)				
	6 months	1 year	2 years	5 years	10 years
2000–2010	96.7 (90.0–98.9)	94.4 (87.2–97.7)	93.3 (85.8–97.0)	89.0 (80.3–93.9)	76.7 (66.5–84.1)
2011–2020	98.0 (92.3–99.5)	98.0 (92.2–99.5)	98.0 (92.2–99.5)	95.2 (87.5–98.2)	N/A
P value	0.09	0.08	0.02	0.00	

N/A, not available

## Supplementary Figures

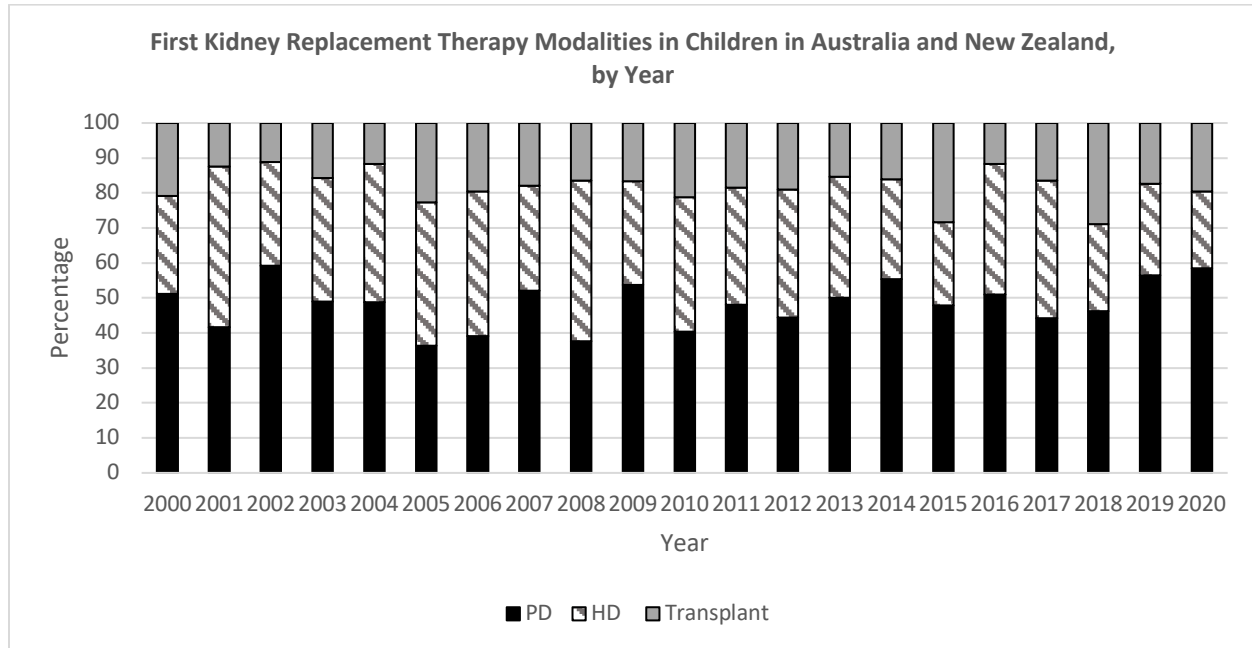


Figure S1. Proportion of the first KRT modalities in children (0–18 years old) in Australia and New Zealand, 2000–2020, by year. *HD*, hemodialysis; *KRT*, kidney replacement therapy; *KT*, kidney transplantation; *PD*, peritoneal dialysis

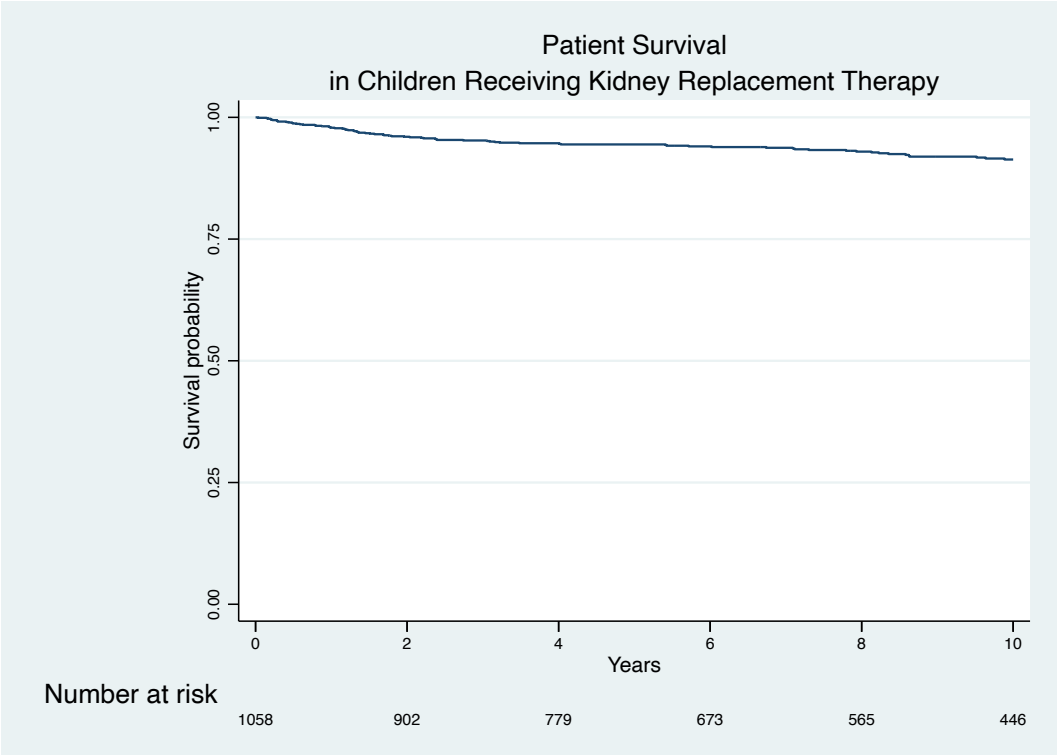


Figure S2. Overall patient survival in children receiving the first KRT modality. *KRT*, kidney replacement therapy

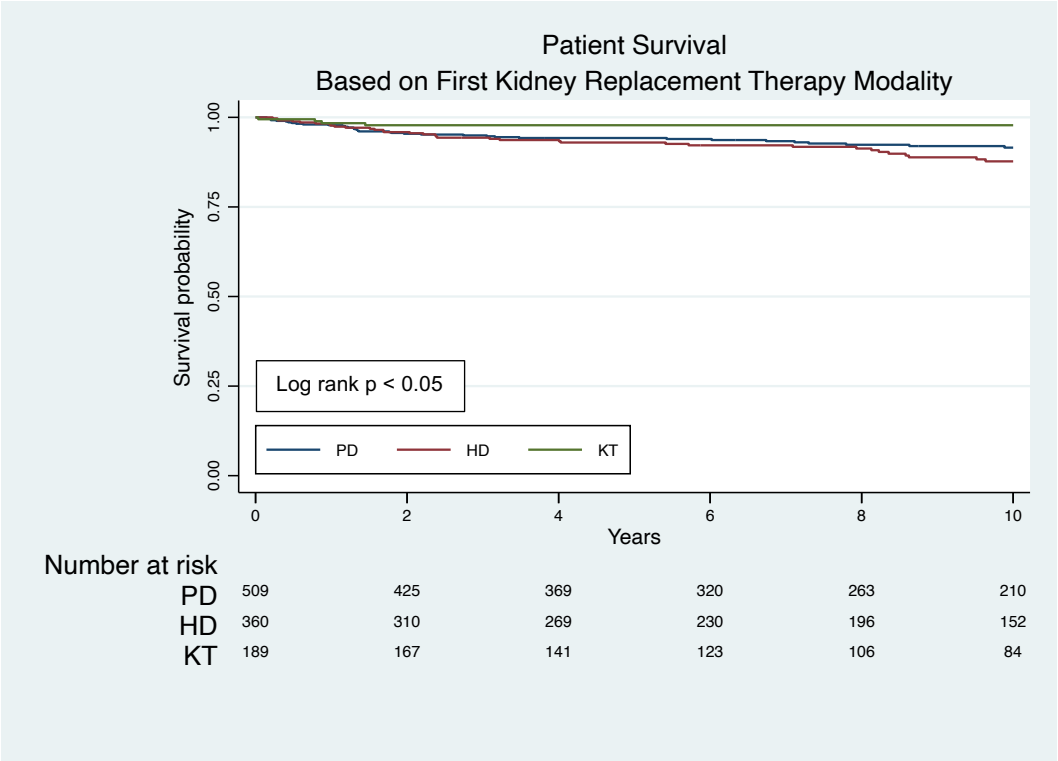


Figure S3. Patient survival in children based on first KRT modality, log rank  $p < 0.007$ . *HD*, hemodialysis; *KRT*, kidney replacement therapy; *KT*, kidney transplantation; *PD*, peritoneal dialysis



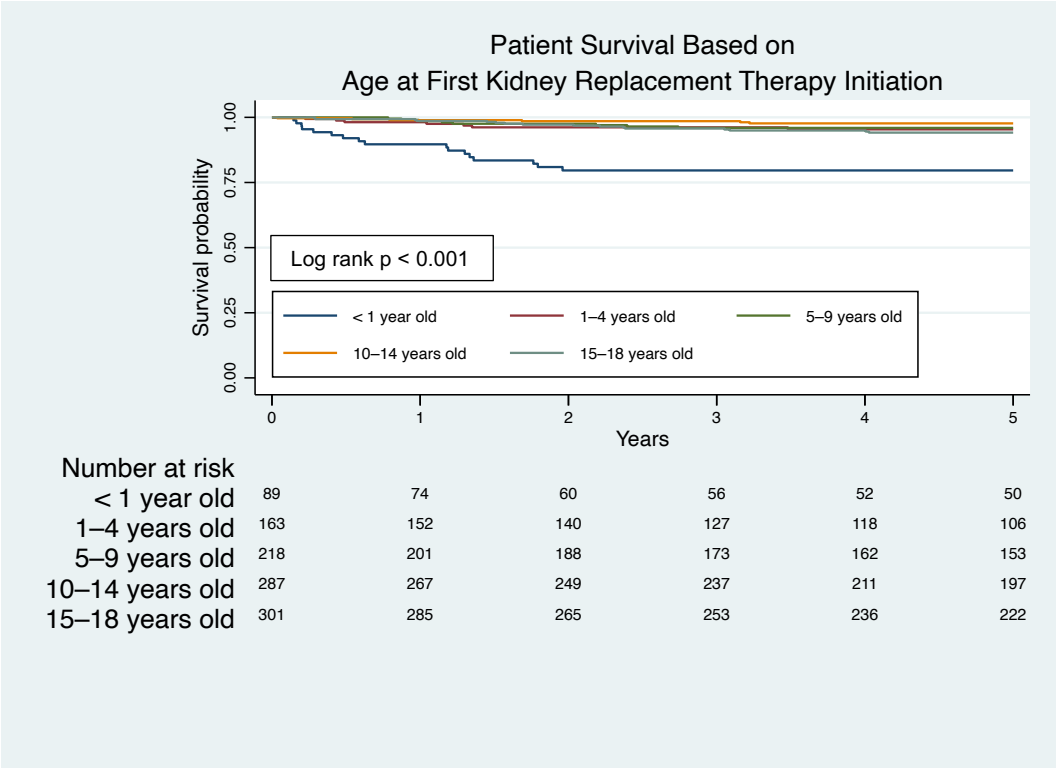


Figure S4. Patient survival in children receiving KRT based on age at KRT initiation, log rank  $p < 0.001$ . *KRT*, kidney replacement therapy

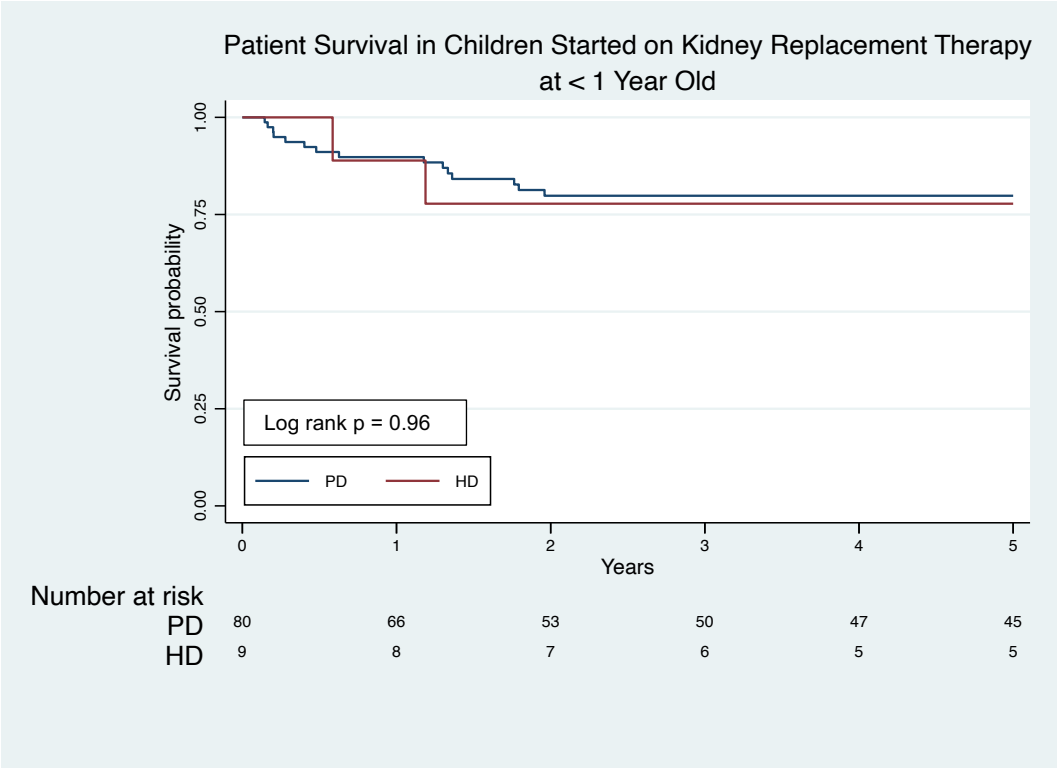


Figure S5. Patient survival in children started on KRT at < 1 year old, log rank p = 0.96. *HD*, hemodialysis; *KRT*, kidney replacement therapy; *PD*, peritoneal dialysis

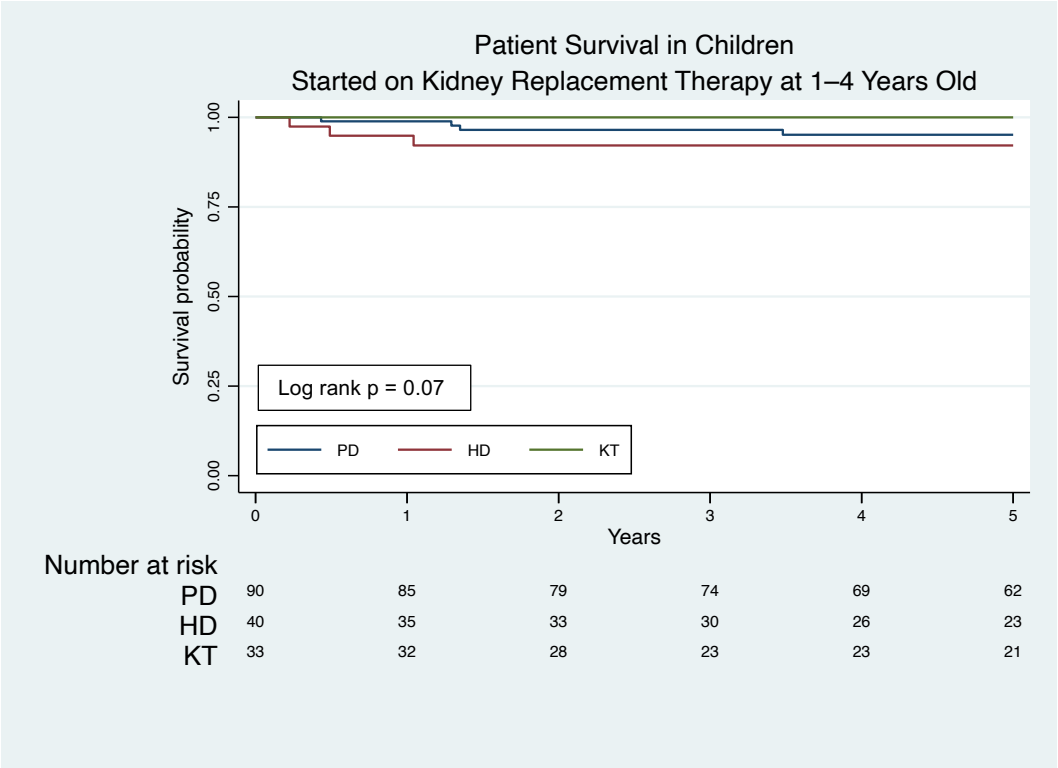


Figure S6. Patient survival in children started on KRT at 1–4 years old, log rank  $p = 0.07$ . *HD*, hemodialysis; *KRT*, kidney replacement therapy; *PD*, peritoneal dialysis

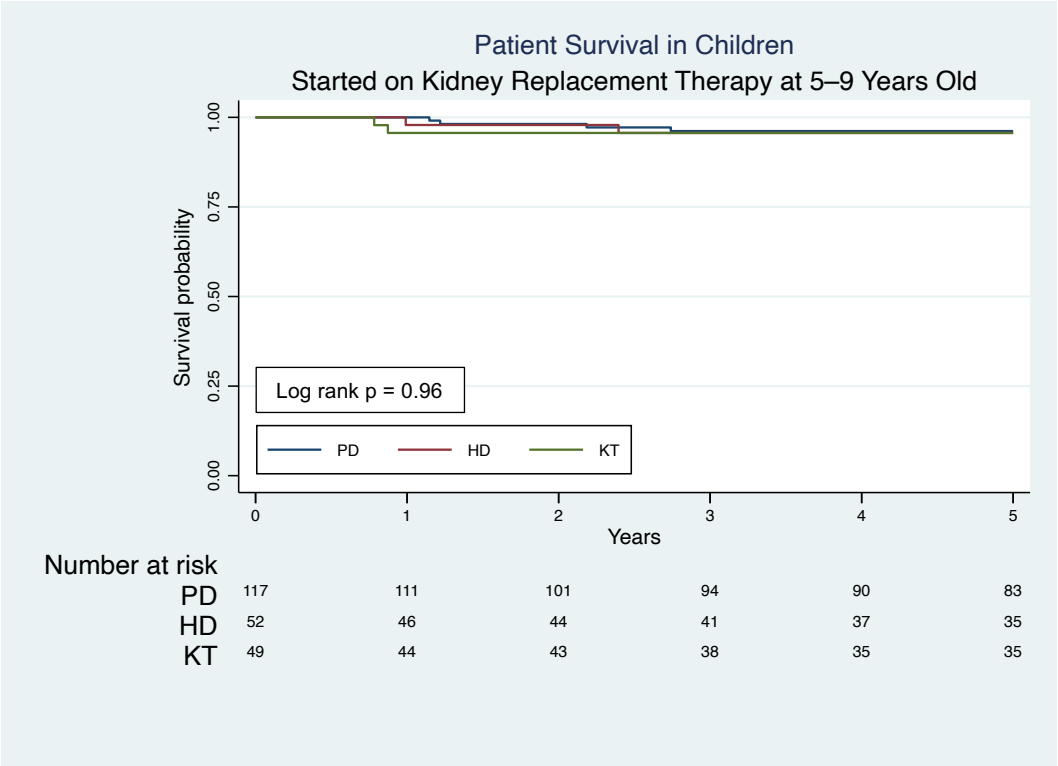


Figure S7. Patient survival in children started on KRT at 5–9 years old, log rank  $p = 0.96$ . *HD*, hemodialysis; *KRT*, kidney replacement therapy; *PD*, peritoneal dialysis

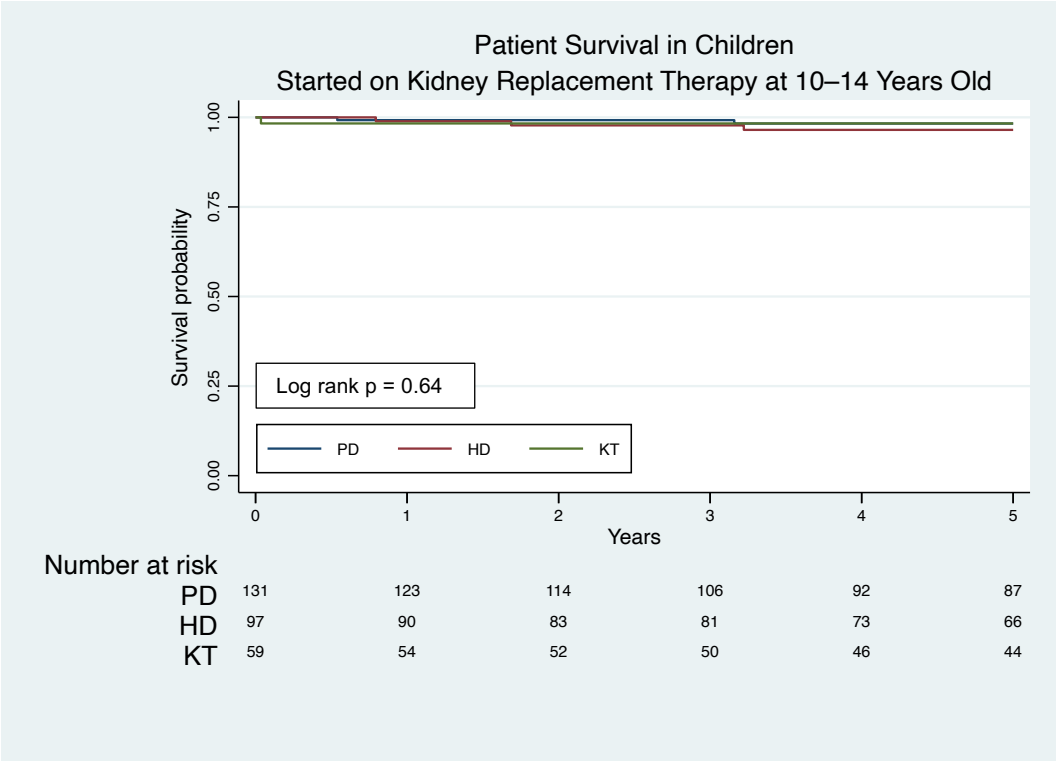


Figure S8. Patient survival in children started on KRT at 10–14 years old, log rank  $p = 0.64$ . *HD*, hemodialysis; *KRT*, kidney replacement therapy; *PD*, peritoneal dialysis

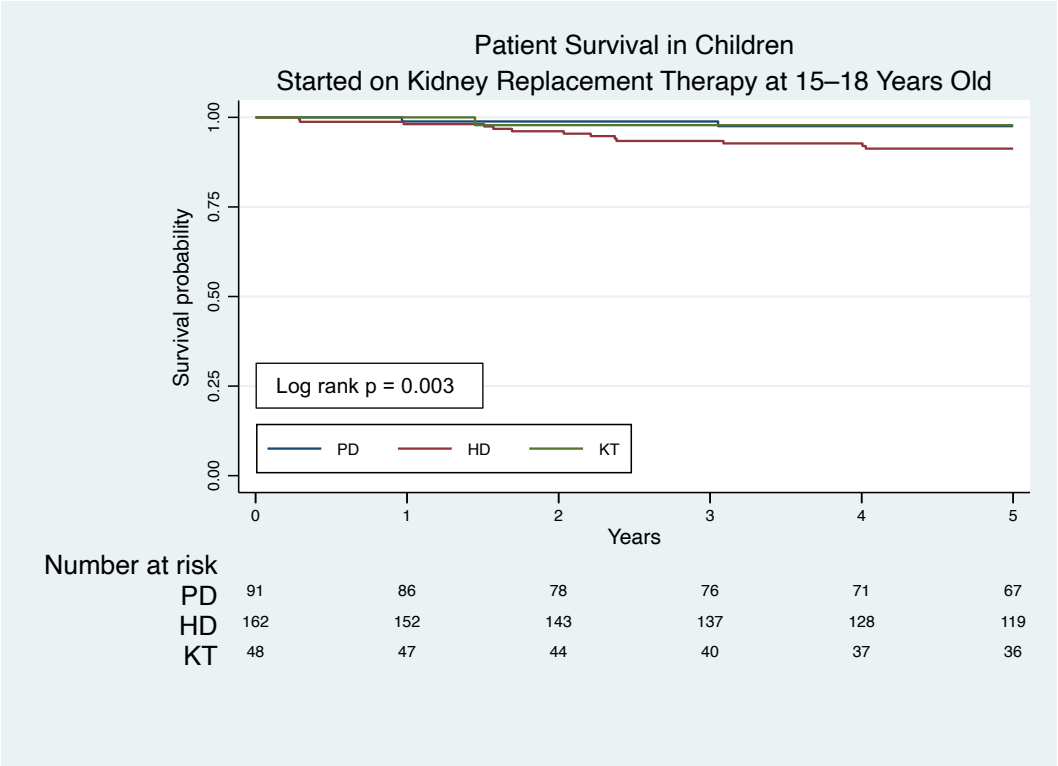


Figure S9. Patient survival in children started on KRT at 15–18 years old, log rank  $p = 0.0033$ . *HD*, hemodialysis; *KRT*, kidney replacement therapy; *PD*, peritoneal dialysis

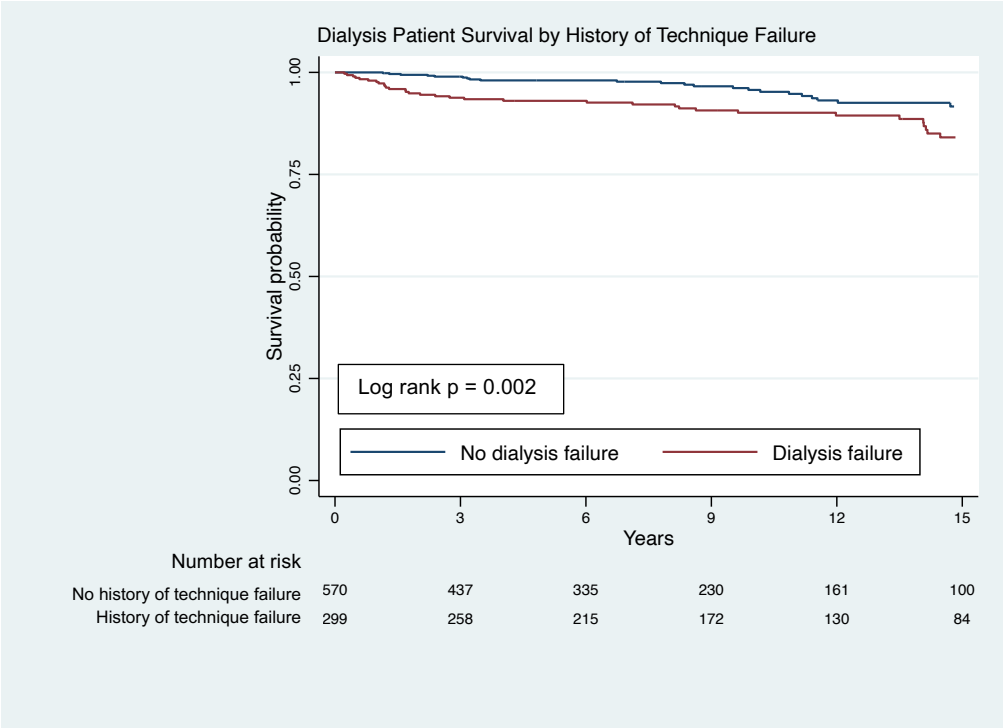


Figure S10. Dialysis patient survival related with history of technique failure (among all patients receiving PD and HD as the first KRT modality). *HD*, hemodialysis; *KRT*, kidney replacement therapy; *PD*, peritoneal dialysis

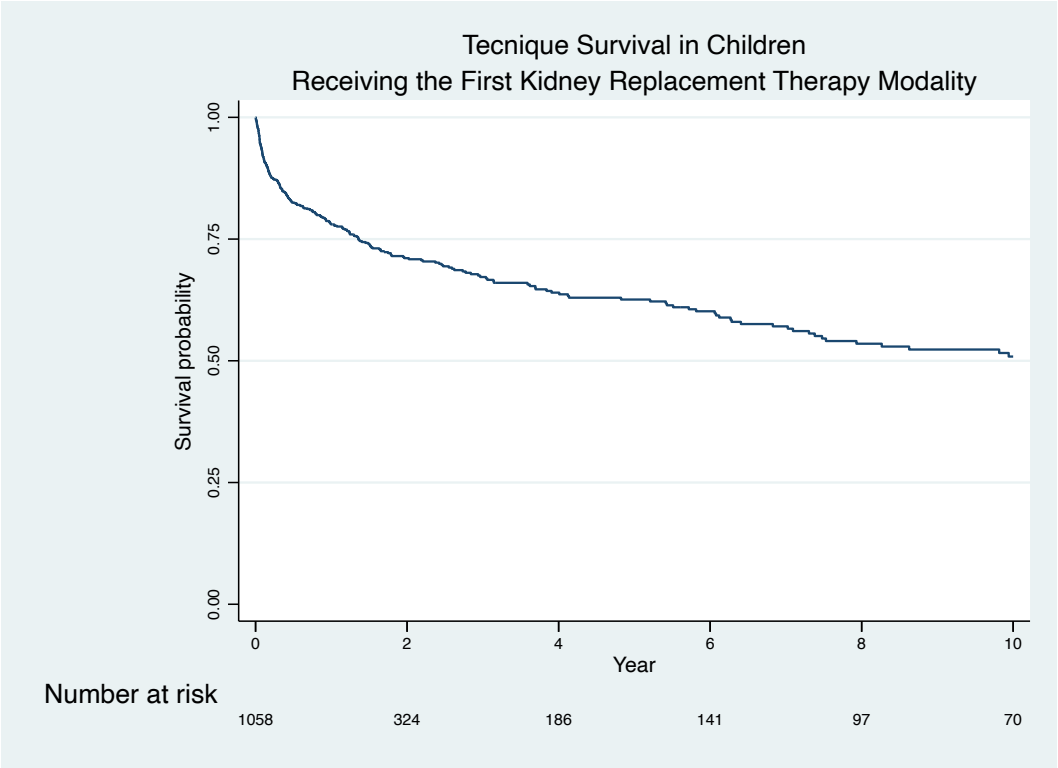


Figure S11. Overall technique survival in children receiving the first KRT modality. *KRT*, kidney replacement therapy



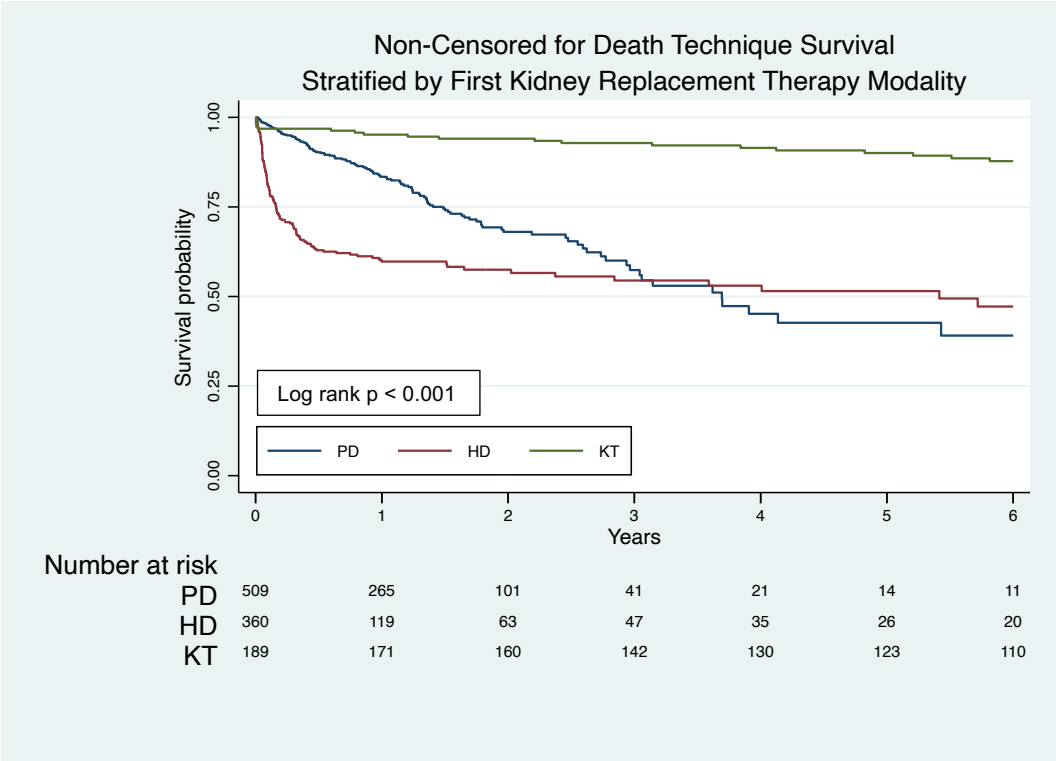


Figure S12. Non-censored for death technique survival stratified by the first KRT modality, log rank  $p < 0.001$ . *HD*, hemodialysis; *KRT*, kidney replacement therapy; *KT*, kidney transplantation; *PD*, peritoneal dialysis

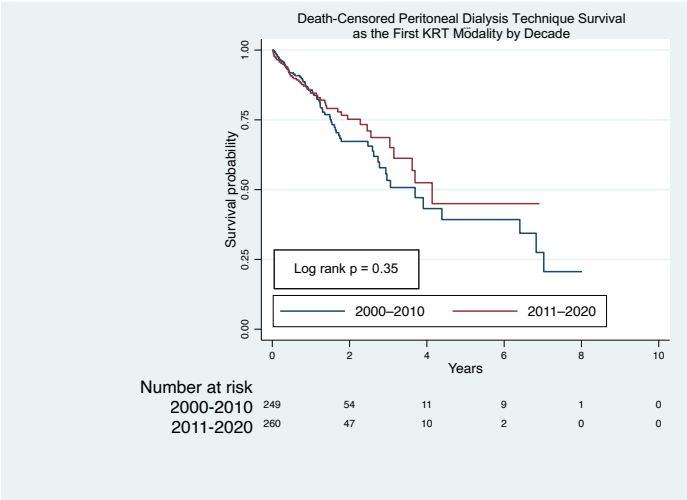


Figure S13. Death-censored PD technique survival as the first KRT modality by decade, log rank  $p = 0.35$ . *KRT*, kidney replacement therapy; *PD*, peritoneal dialysis

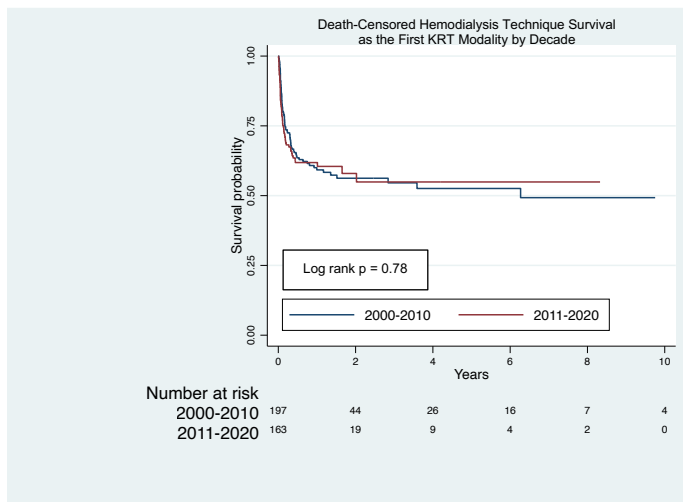


Figure S14. Death-censored HD technique survival as the first KRT modality by decade, log rank  $p = 0.78$ . *HD*, hemodialysis; *KRT*, kidney replacement therapy

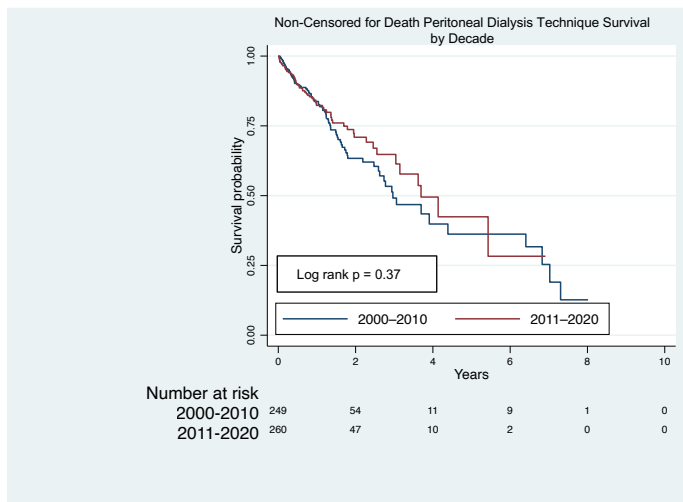


Figure S15. Non-censored for death PD technique survival by decade, log rank  $p = 0.37$ . *KRT*, kidney replacement therapy; *PD*, peritoneal dialysis

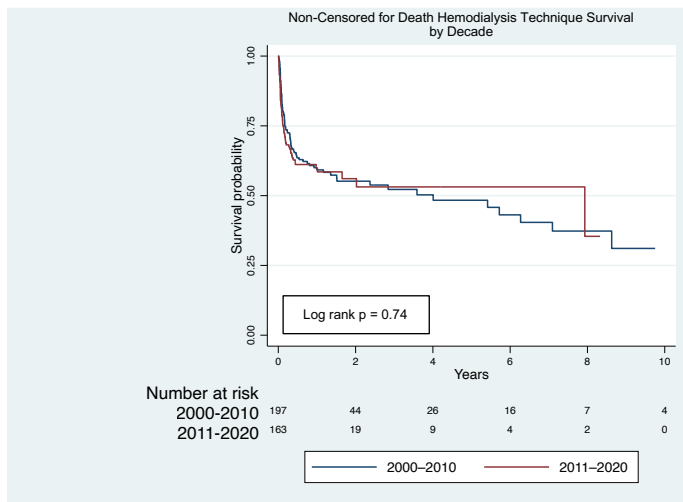


Figure S16. Non-censored for death HD technique survival by decade, log rank  $p = 0.74$ . *HD*, hemodialysis; *KRT*, kidney replacement therapy

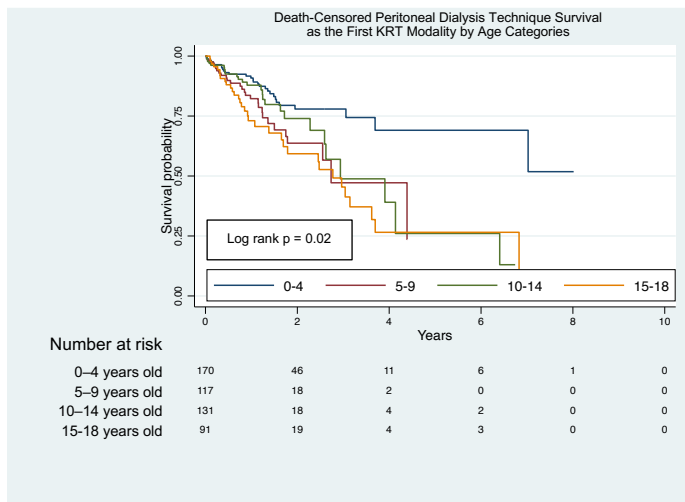


Figure S17. Death-censored PD technique survival as the first KRT modality by age categories, log rank  $p = 0.02$ . *KRT*, kidney replacement therapy; *PD*, peritoneal dialysis

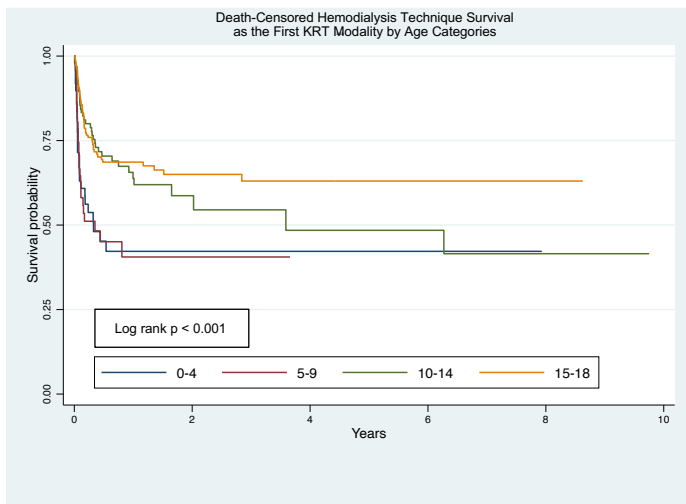


Figure S18. Death-censored HD technique survival as the first KRT modality by age categories, log rank  $p < 0.001$ . *HD*, hemodialysis

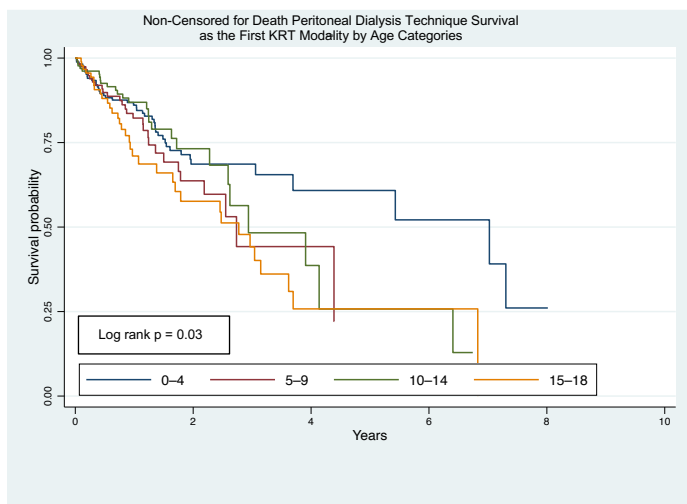


Figure S19. Non censored for death PD technique survival for PD as the first KRT modality by age categories, log rank  $p = 0.03$ . *KRT*, kidney replacement therapy; *PD*, peritoneal dialysis



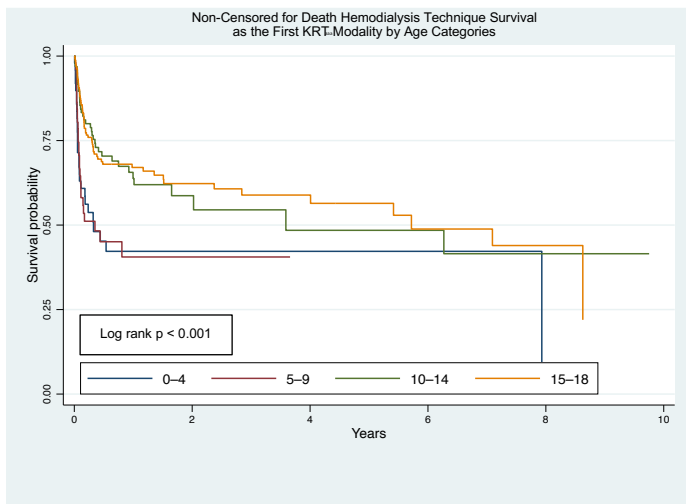


Figure S20. Non-censored for death HD technique survival for HD as the first KRT modality by age categories , log rank  $p < 0.001$ . *HD*, hemodialysis; *KRT*, kidney replacement therapy;

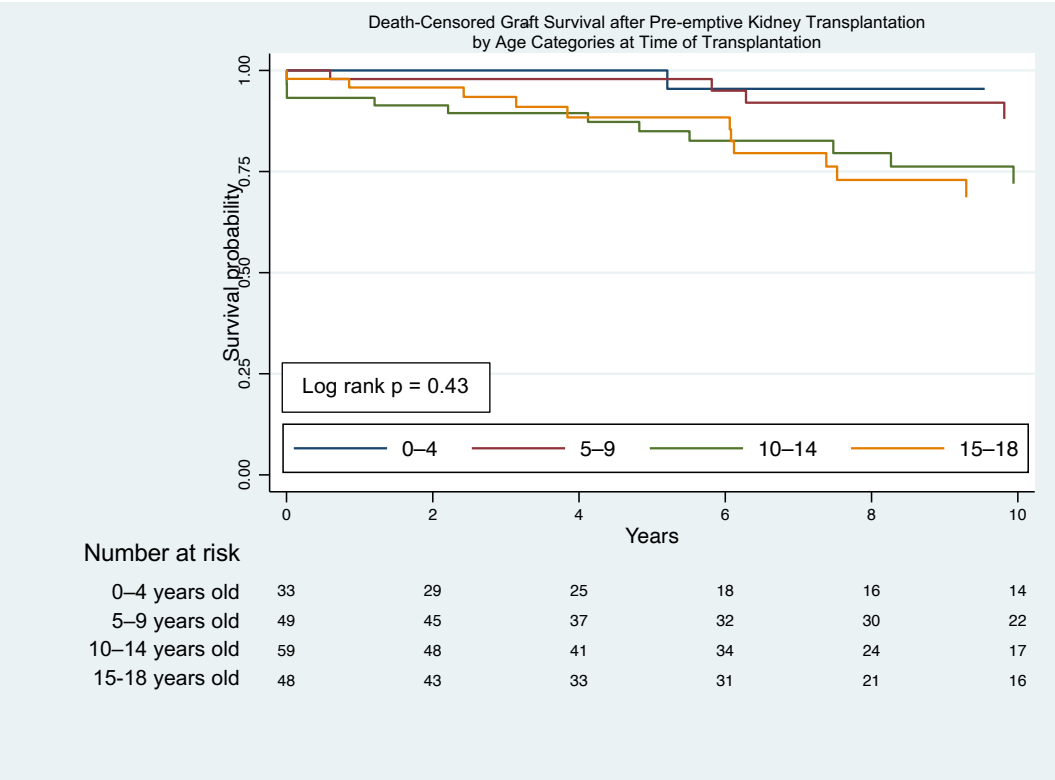


Figure S21. Death-censored graft survival by age categories at time of transplantation, log rank p = 0.43. *KT*, kidney transplantation

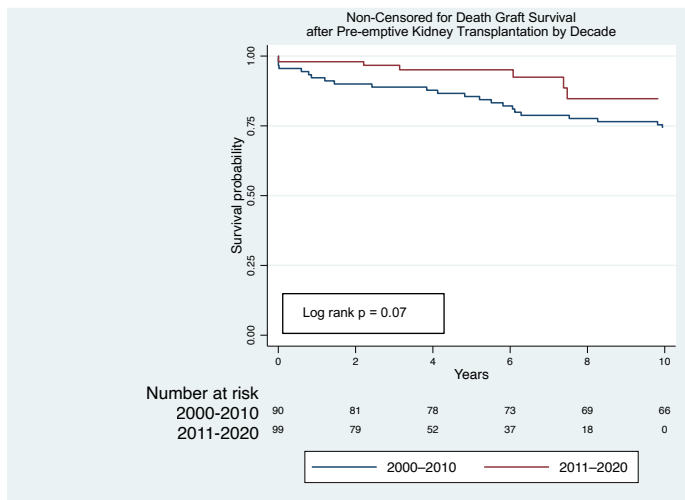


Figure S22. Non-censored for death graft survival after pre-emptive KT by decade, log rank  $p = 0.07$ . *KRT*, kidney replacement therapy; *KT*, kidney transplantation

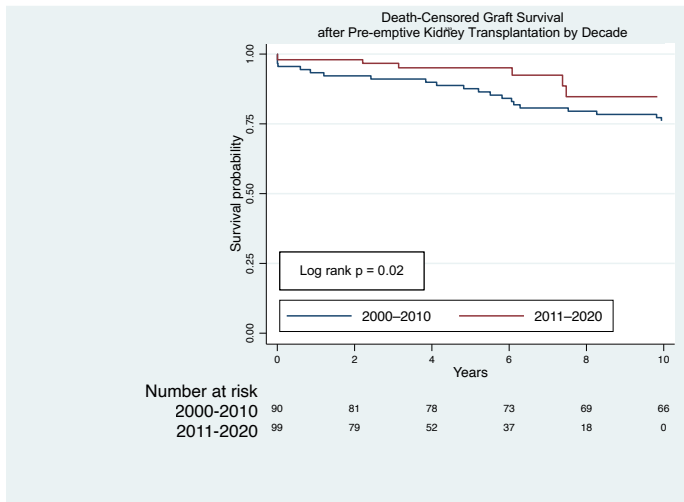


Figure S23. Death-censored graft survival after pre-emptive KT by decade. *KRT*, kidney replacement therapy; *KT*, kidney transplantation

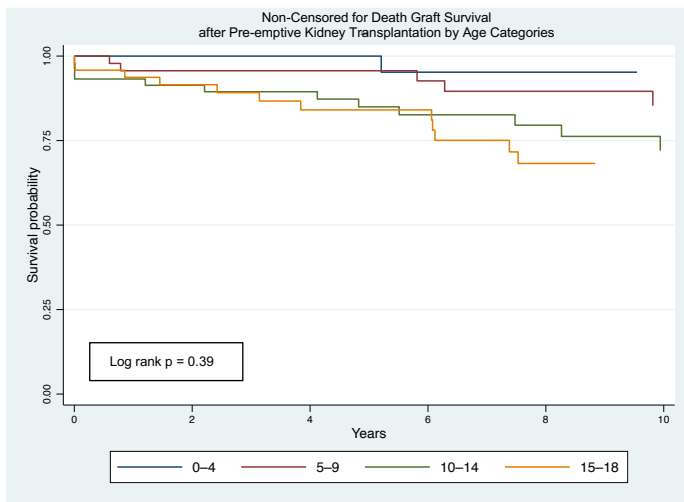


Figure S24. Non-censored for death graft survival after pre-emptive KT by age categories at time of transplantation, log rank  $p = 0.39$ . *KT*, kidney transplantation

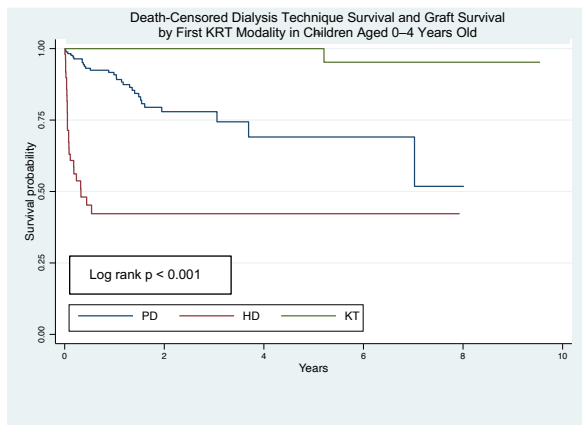


Figure S25. Death-censored dialysis technique survival and graft survival stratified by first KRT modality in children aged 0–4 years old, log rank  $p < 0.001$ . *HD*, hemodialysis; *KRT*, kidney replacement therapy; *KT*, kidney transplantation; *PD*, peritoneal dialysis

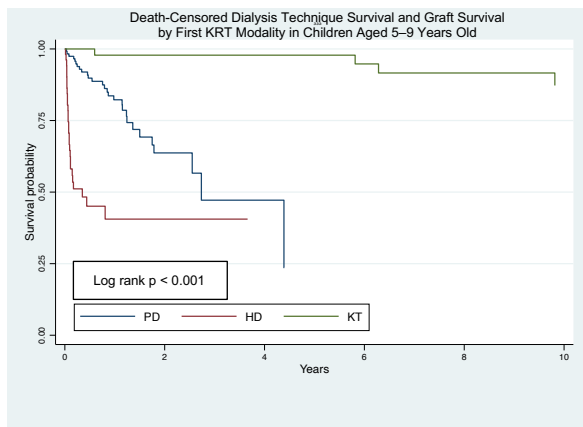


Figure S26. Death-censored dialysis technique survival and graft survival stratified by first KRT modality in children aged 5–9 years old, log rank  $p < 0.001$ . *HD*, hemodialysis; *KRT*, kidney replacement therapy; *KT*, kidney transplantation; *PD*, peritoneal dialysis

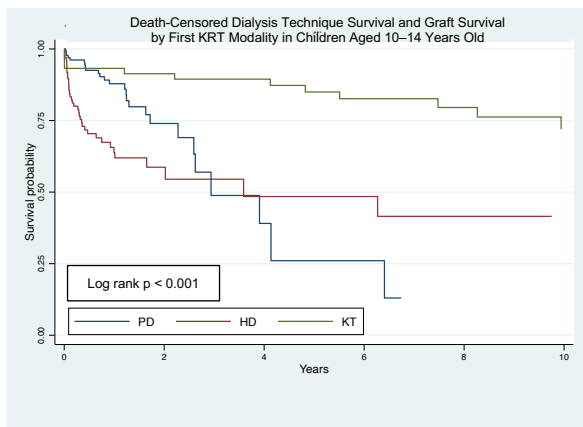


Figure S27. Death-censored dialysis technique survival and graft survival stratified by first KRT modality in children aged 10–14 years old, log rank  $p < 0.001$ . *HD*, hemodialysis; *KRT*, kidney replacement therapy; *KT*, kidney transplantation; *PD*, peritoneal dialysis



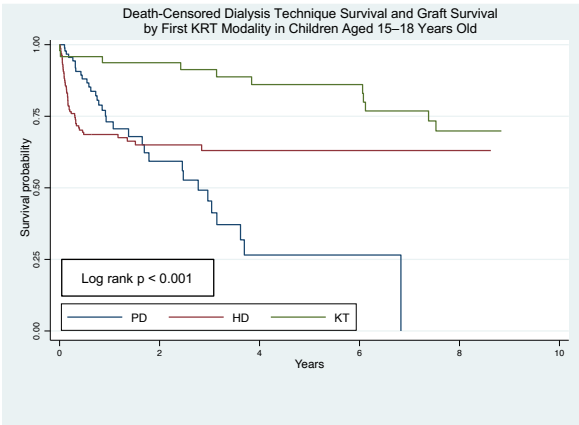


Figure S28. Death-censored dialysis technique survival and graft survival stratified by first KRT modality in children aged 15–18 years old, log rank  $p < 0.001$

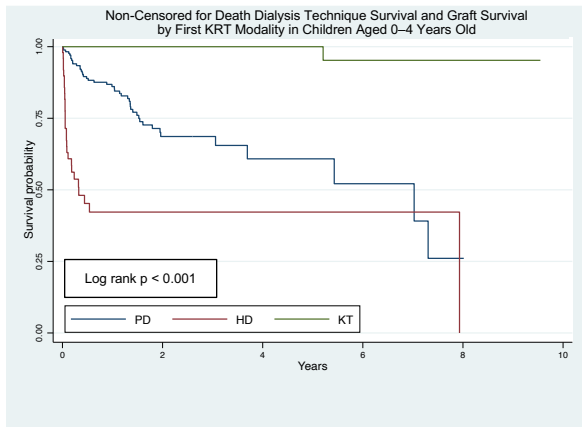


Figure S29. Non-censored for death dialysis technique survival and graft survival stratified by first KRT modality in children aged 0–4 years old, log rank  $p < 0.001$

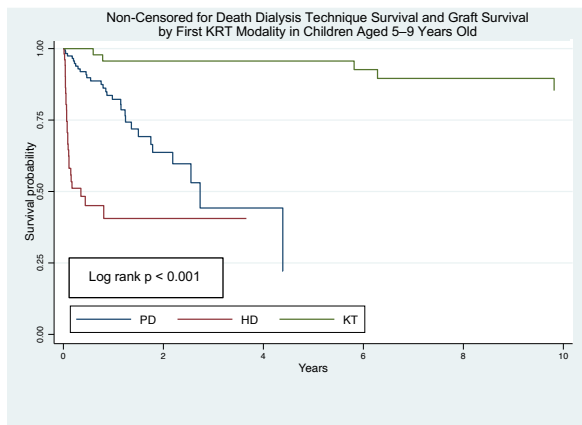


Figure S30. Non-censored for death dialysis technique survival and graft survival stratified by first KRT modality in children aged 5–9 years old, log rank  $p < 0.001$ . *HD*, hemodialysis; *KRT*, kidney replacement therapy; *KT*, kidney transplantation; *PD*, peritoneal dialysis

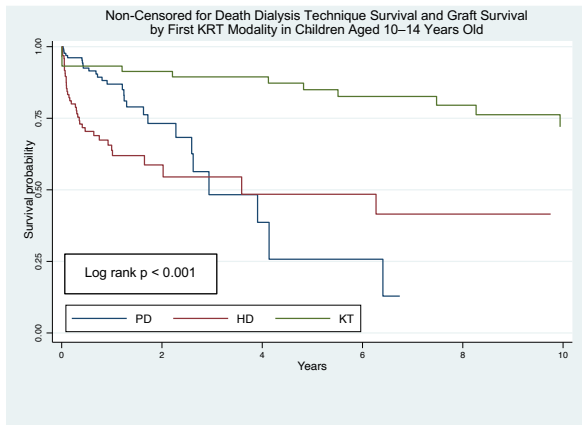


Figure S31. Non-censored for death dialysis technique survival and graft survival stratified by first KRT modality in children aged 10–14 years old, log rank  $p < 0.001$ . *HD*, hemodialysis; *KRT*, kidney replacement therapy; *KT*, kidney transplantation; *PD*, peritoneal dialysis

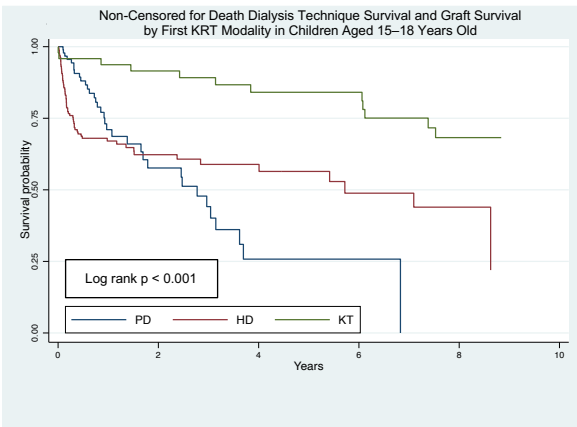


Figure S32. Non-censored for death dialysis technique survival and graft survival stratified by first KRT modality in children aged 15–18 years old, log rank  $p < 0.001$ . *HD*, hemodialysis; *KRT*, kidney replacement therapy; *KT*, kidney transplantation; *PD*, peritoneal dialysis