

Figure S1: Directed Acyclic Graph

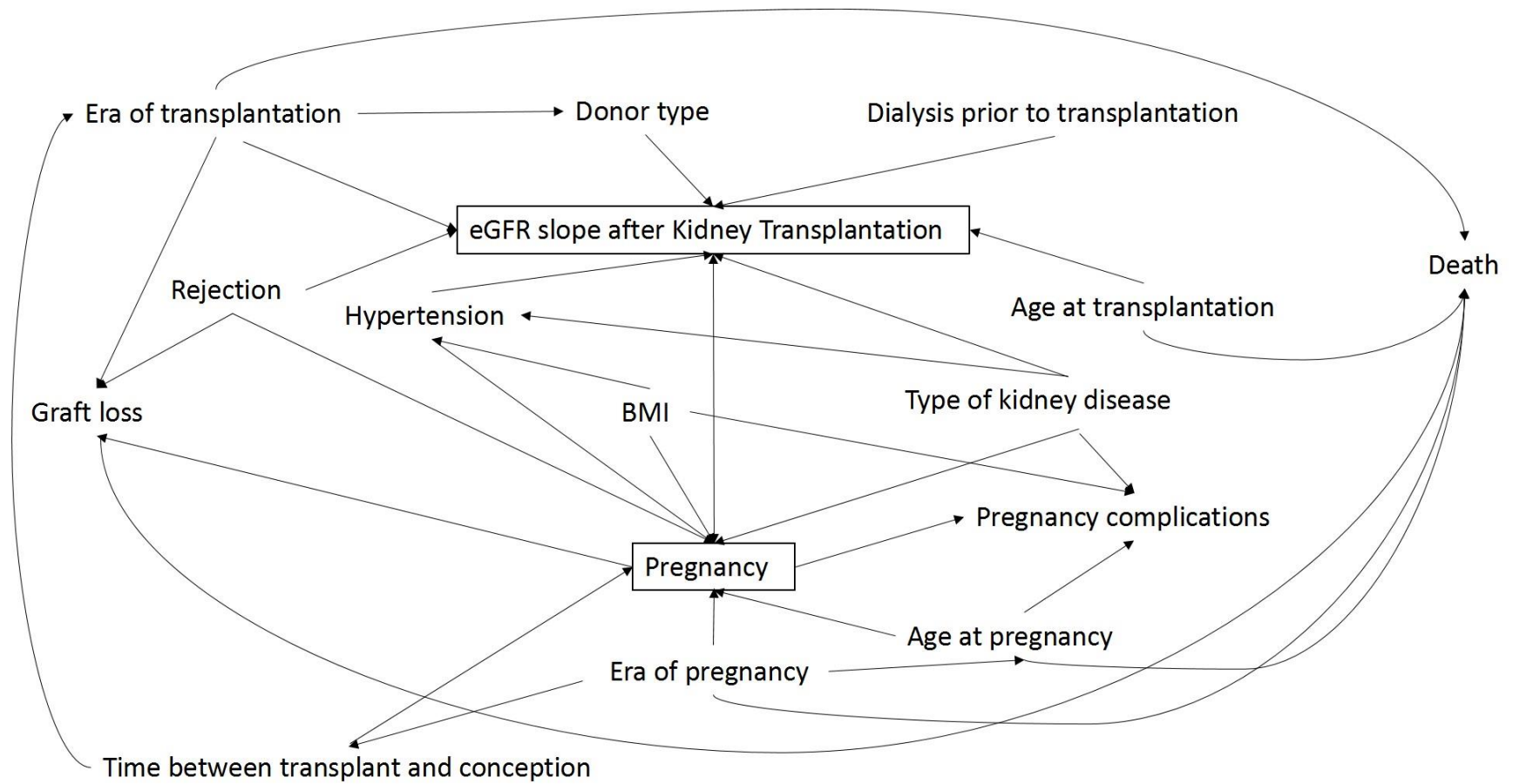


Table S1: Baseline Characteristics Women transplanted before and after 1990

	Total group N = 197		Transplanted ≥ 1990 N = 132		Transplanted < 1990 N = 65	
	N (%)*/ Mean ±SD	Missing N (%)*	N (%)*/ Mean ±SD	Missing N (%)*	N (%)*/ Mean ±SD	Missing N (%)*
Follow-up time after first delivery (years)**	14 (18)	0	9 (10)	0	28 (9)	0
Total pregnancies	295		188		107	
1 pregnancy after KT	109 (55%)		79 (60%)		30 (46%)	
2 pregnancies after KT	78 (40%)		50 (38%)		28 (43%)	
3 pregnancies after KT	10 (5%)		3 (2%)		7 (11%)	
Cause of ESRD		18 (9%)		13 (10%)		
Glomerulonephritis	77 (39%)		48 (36%)		29 (45%)	
Diabetes mellitus	6 (3%)					
Auto-immune (SLE/vasculitis)	8 (4%)					
Tubulo-interstitial	29 (15%)					
Cystic kidney disease	8 (4%)					
Renal vascular disease (excl. vasculitis)	7 (4%)					
Urologic	7 (4%)					
Other congenital hereditary	23 (12%)					
Other multi cystic diseases	5 (3%)					
Other	22 (11%)					
Maternal death during follow-up	28 (14%)	0	8 (6%)	0	20 (31%)	0
Time between first delivery and death (years)**	14 (10)		9 (5)		16 (15)	
Age at KT (years)	25 (6)	0	27 (8)	0	24 (9)	
Year of KT	1995 (12)	0	2003 (13)	0	1982 (9)	0
1971-1989	65 (33%)					
1990-1999	50 (25%)					
2000-2009	56 (28%)					

2010-2015	26 (13%)					
Living donor KT	83 (42%)	6 (3%)	78 (59%)	2 (2%)	5 (8%)	4(6%)
Pre-emptive KT	36 (18%)	18 (9%)	32 (24%)	12 (9%)	4 (6%)	6 (9%)
> 1 KT before pregnancy	39 (20%)	5 (3%)	23 (17%)	3 (2%)	16 (25%)	2 (3%)
Rejection before pregnancy	68 (35%)	46 (23%)	37 (28%)	30 (23%)	30 (46%)	16 (25%)
Graft loss during pregnancy	1 (0.5%)	0	1 (0.5%)	0		
Graft loss after first pregnancy	42 (24%)	25 (13%)	26 (20%)	13 (10%)	16 (25%)	12 (19%)
Time between first pregnancy and graft loss (years)**	6 (7)	0	6 (5)	0	8 (8)	0
Time between KT and graft loss (years)**	12 (7)	0	11 (7)	0	13 (7)	0

KT: kidney transplantation (last KT before pregnancy), eGFR: estimated Glomerular Filtration Rate, ESRD: end stage renal disease, MAP: mean arterial pressure, CNI: calcineurine inhibitors, BMI: body mass index, SCr: serum creatinine, SD: standard deviation * Due to rounding it can be possible that percentages not reach 100%, **Median (IQR)

Table S2: Characteristics of all 1st pregnancies (n=197) before and after 1990

	Total group N = 197		Transplanted ≥ 1990 = 132		Transplanted < 1990 N = 65	
	N (%)*/ Mean ±SD	Missing N (%)*	N (%)*/ Mean ±SD	Missing N (%)*	N (%)*/ Mean ±SD	Missing N (%)*
KT to conception interval (year) **	4 (6)	8 (4%)	4 (5)	3 (2%)	5 (6)	5 (8%)
0- 2 year	29 (15%)					
2 – 4 year	78 (41%)					
5 – 9 years	49 (25%)					
10 - 24 years	33 (17%)					
Pre-pregnancy eGFR	62 (±21)	7 (4%)	58 (±19)	3 (2%)	71 (±24)	4 (6%)
eGFR < 45 ml/min/1.73m²	34 (17%)		25 (19%)		9 (14%)	
eGFR < 30 ml/min/ 1.73m²	8 (4%)		4 (3%)		4 (6%)	
Pre-pregnancy MAP	95 (±10)	30 (15%)	94 (±10)	15 (11%)	97 (±12)	15 (23%)
Pre-pregnancy hypertension	99 (50%)	24 (12%)	71 (54%)	12 (9%)	28 (43%)	12 (19%)
CNI before first pregnancy	97 (49%)	8 (4%)	83 (63%)	4 (3%)	14 (22%)	4 (6%)
Year of pregnancy	2004 (18)	0	2009 (10)	0	1989 (10)	0
1979-1989	37 (19%)					
1990-1999	44 (22%)					
2000-2009	54 (27%)					
2010-2017	62 (32%)					
Pre-pregnancy BMI	25 (±4)	70 (36%)	25(±4)	33 (25%)	23 (±2)	37 (57%)
Primipara at first pregnancy after KT	154 (78%)	5 (3%)	100 (76%)	2 (2%)	54 (83%)	3 (5%)
Preterm < 37 weeks	102 (52%)	13 (7%)	77 (58%)	4 (3%)	25 (39%)	9 (14%)
Preterm < 34 weeks	50 (25%)					
Birthweight (gram)	2281 (±853)	13 (7%)	2174 (±928)	5 (4%)	2520 (±597)	8 (12%)

Low birthweight (<2500 gram)	103 (52%)		76 (58%)		27 (42%)	
Very low birthweight (<1500 gram)	30 (15%)		27 (21%)		3 (5%)	
Gestational hypertension	90 (46%)	37 (19%)	69 (52%)	15 (11%)	21 (32%)	22 (34%)
Severe hypertension	30 (15%)	56 (28%)	22 (17%)	29 (22%)	8 (12%)	28 (43%)
Preeclampsia	60 (31%)	32 (16%)	49 (37%)	12 (9%)	11 (17%)	20 (31%)
% Scr decrease during pregnancy	17 (\pm 10)	45 (23%)	17 (\pm 10)	22 (17%)	15 (\pm 11)	25 (38%)
> 15% Scr decrease during pregnancy	90 (46%)		67 (51%)		21 (32%)	

KT: kidney transplantation (last KT before pregnancy), eGFR: estimated Glomerular Filtration Rate, ESRD: end stage renal disease, MAP: mean arterial pressure, CNI: calcineurine inhibitors, BMI: body mass index, SCr: serum creatinine, SD: standard deviation * Due to rounding it can be possible that percentages not reach 100%, **Median (IQR)

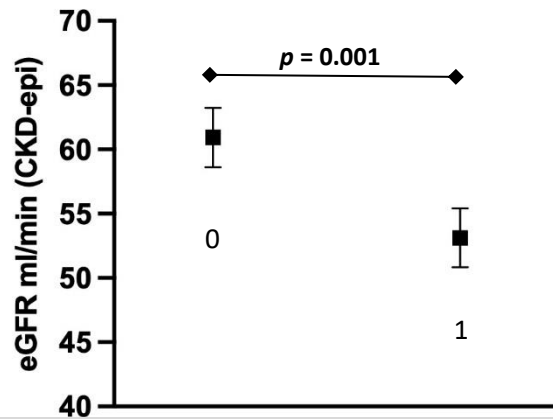
Table S3: Declaration of missing subjects per pregnancy interval

Missing	Pregnancy interval 0			Pregnancy interval 1		
Reasons for missing pregnancy interval 0				Reasons for missing pregnancy interval 1		
1	R-27 unknown/check-ups non-academic hospital	E-22 Conception within 6months after KT	L-4 unknown/check-ups non-academic hospital	E-7 Short time period between 1 st and 2 nd preg after KT	A-2 Graft loss during pregnancy	L-23 Short time period between 1 st and 2 nd preg after KT
2	R-14 Conception within 6 months after. KT	L-22 unknown/check-ups non-academic hospital	L-24 unknown/check-ups non-academic hospital	E-17 Short time period between 1 st and 2 nd preg after KT	A-18 Lost to follow-up after pregnancy	
3	L-5 unknown/check-ups non-academic hospital	R-9 Conception within 6months after KT	R-24 unknown/check-ups non-academic hospital	E-29 Short time period between 1 st and 2 nd preg after KT	E-8 DCGL before annual eGFR measurement	
4				L-13 Short time period between 1 st and 2 nd preg after KT	L-33 Death before annual eGFR measurement	
5				L-23 Short time period between 1 st and 2 nd preg after KT	R-6 recent pregnancy no follow up yet	

7				M-5 Short time period between 1 st and 2 nd preg after KT	R-8 recent pregnancy nn follow up yet	
8				R-1 Short time period between 1 st and 2 nd preg after KT	R-35 unknown/check-ups non-academic hospital	
9				G-41 Short time period between 1 st and 2 nd preg after KT		
10				G-44 Short time period between 1 st and 2 nd preg after KT		
Included	Pregnancy interval 1& 2	Pregnancy interval 1	Pregnancy interval 2	Pregnancy interval 0 & 2	Pregnancy interval 0	Pregnancy interval. 0, 2 & 3
Total number of included eGFR measurements	18	53	31	132	36	11

Figure S2: Adjusted mean eGFR before and after pregnancy after kidney transplantation (GEE)

Only women with one pregnancy after kidney transplantation (n=109)



Characteristics per pregnancy interval	Before 1st pregnancy (0)	After 1st pregnancy (1)
Women included	105	100
Total nr. of eGFR	681	796
Median nr. of eGFR per woman (IQR)	6 (4)	5 (9)
Median yrs between first and last eGFR (IQR)	2.09 (4.22)	6.14 (10.20)
Mean eGFR slope (compared to interval 0)	Reference	-7.81 ml/min/1.73m ² (p=0.001)

GEE: generalized estimated equations; a multilevel method. KT: kidney transplantation (last KT before pregnancy); eGFR: estimated Glomerular Filtration Rate. *median (IQR). Subject level: subject ID, Within-subject level: days after KT. In the model, years after KT was used as a continuous covariate and pregnancy interval as a categorical factor. Error bars illustrate standard deviation (SD). eGFR during pregnancy was excluded.

Table S4: Multivariate analysis with adverse pregnancy outcomes.

	B coefficient	Standard error of the mean (SEM)	p-value
After first pregnancy	-0.73	3.41	0.83
Year of KT \geq 1990	2.83	2.44	0.25
Transplant vintage (years)	-1.00	0.24	<0.01
Age at KT	0.03	0.22	0.90
Primipara	0.62	2.81	0.83
Rejection before 1st pregnancy	-2.90	1.65	0.08
KT to 1st conception interval (years)	1.20	0.27	<0.01
Pre-pregnancy eGFR (1st pregnancy)	0.82	0.06	<0.01
Pre-pregnancy hypertension (1st pregnancy)	-1.31	2.35	0.58
CNI before 1st pregnancy	0.62	1.59	0.70
Gestational hypertension	-0.09	3.40	0.98
Low birthweight <2500 gram	-0.82	3.13	0.80
> 15% SCr decrease during pregnancy	-0.30	3.22	0.93

For this analysis a dichotomous variable 'After first pregnancy' was created (before or after pregnancy). After pregnancy means all eGFR measurements after 1st pregnancy (pregnancy interval 1), after 2nd pregnancy (pregnancy interval 2) and after 3rd pregnancy (pregnancy interval 3). eGFRs during pregnancy and within 6 months after delivery were excluded. eGFR: estimated Glomerular Filtration Rate, CNI: calcineurin inhibitor, GEE: generalized estimated equations, KT: kidney transplantation

