

SUPPLEMENTAL MATERIALS

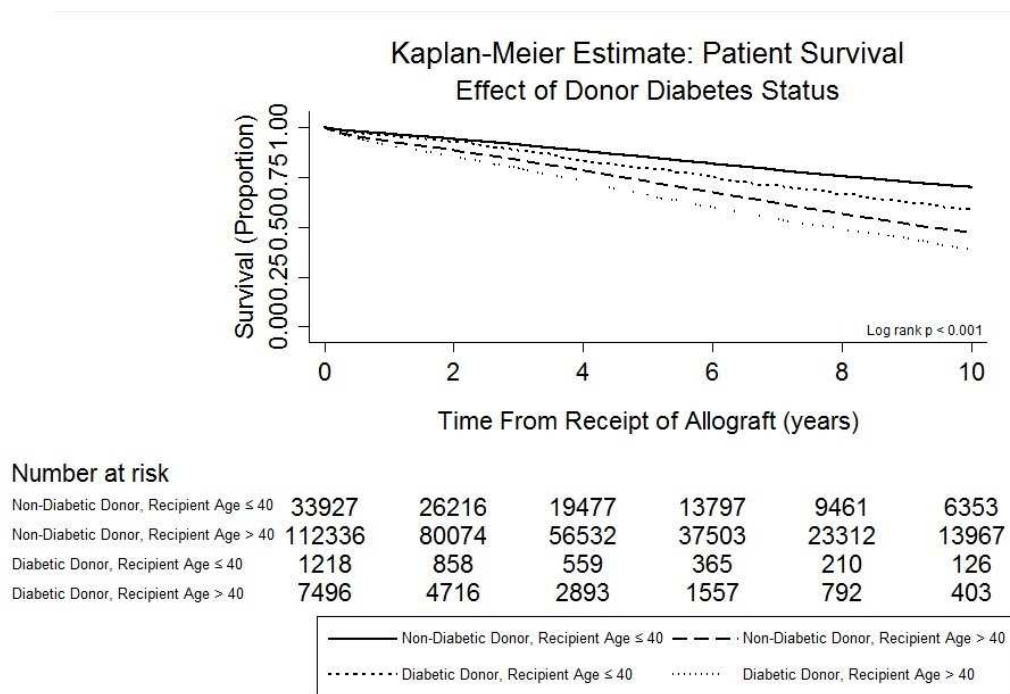
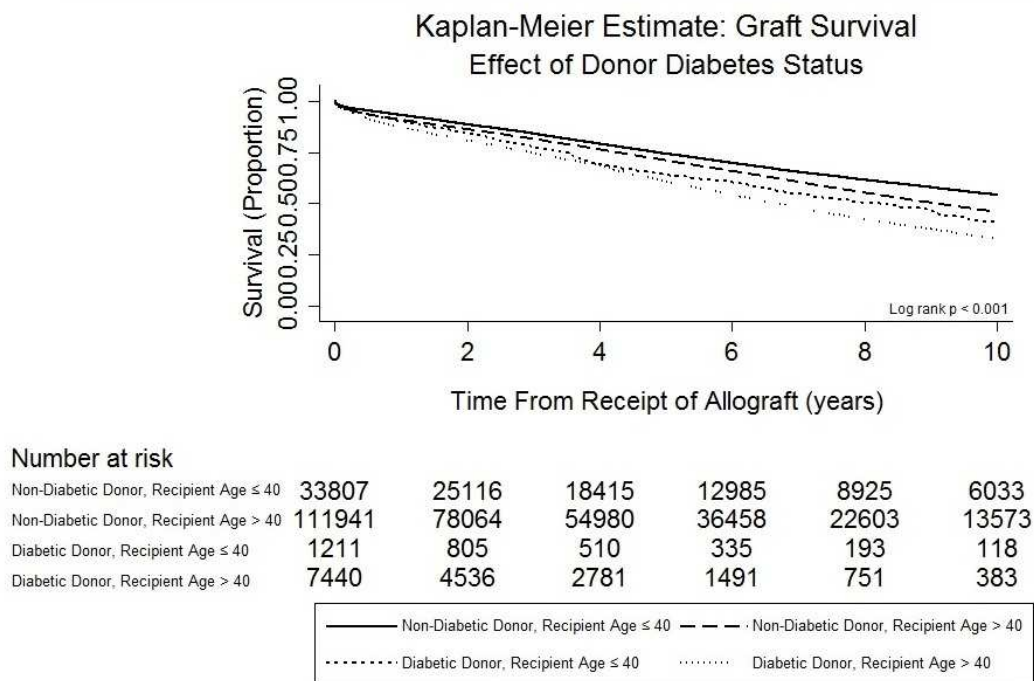
Figure S1a. Kaplan-Meier curve evaluating mortality in recipients of diabetic versus non-diabetic donor kidneys, stratified by recipient age 40.**Figure S1b.** Kaplan-Meier curve evaluating all-cause allograft failure in recipients of diabetic versus non-diabetic donor kidneys, stratified by recipient age 40.

Figure S1c. Kaplan-Meier curve evaluating mortality in recipients of diabetic versus non-diabetic donor kidneys, stratified by recipient age 65.

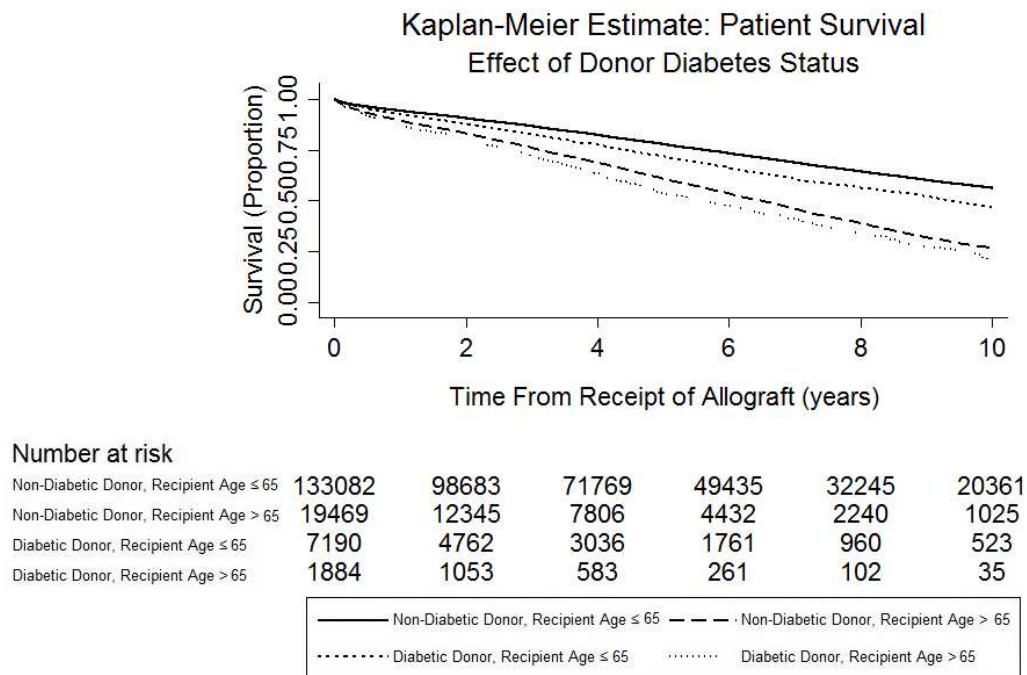


Figure S1d. Kaplan-Meier curve evaluating all-cause allograft failure in recipients of diabetic versus non-diabetic donor kidneys, stratified by recipient age 65.

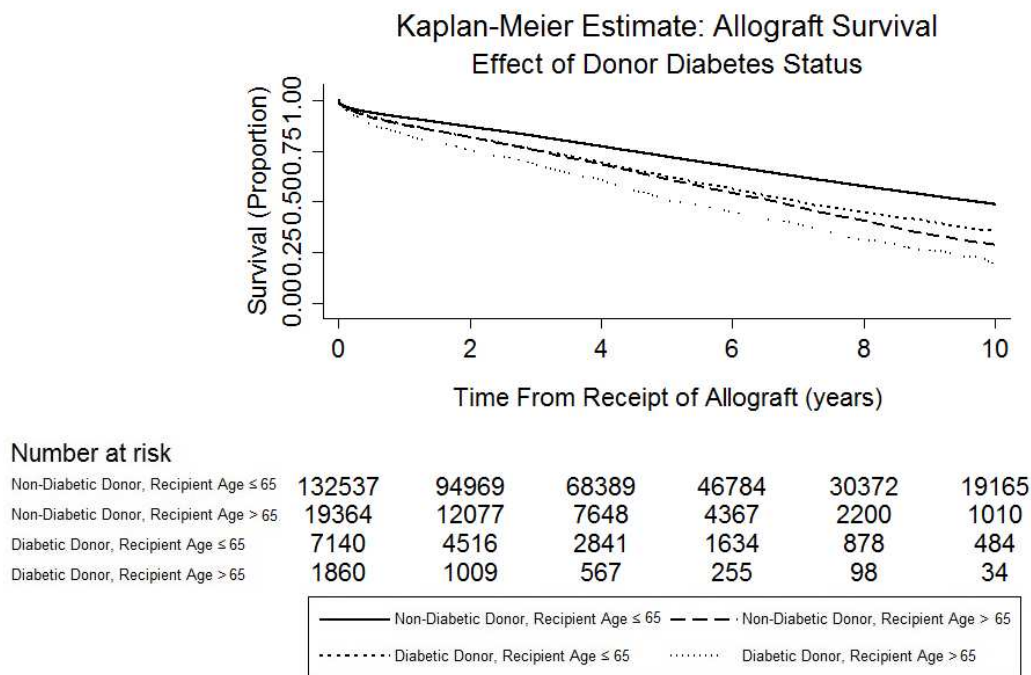


Figure S1e. Risk of all-cause allograft failure: Older recipients of non-diabetic donor kidneys vs. younger recipients of diabetic donor kidneys

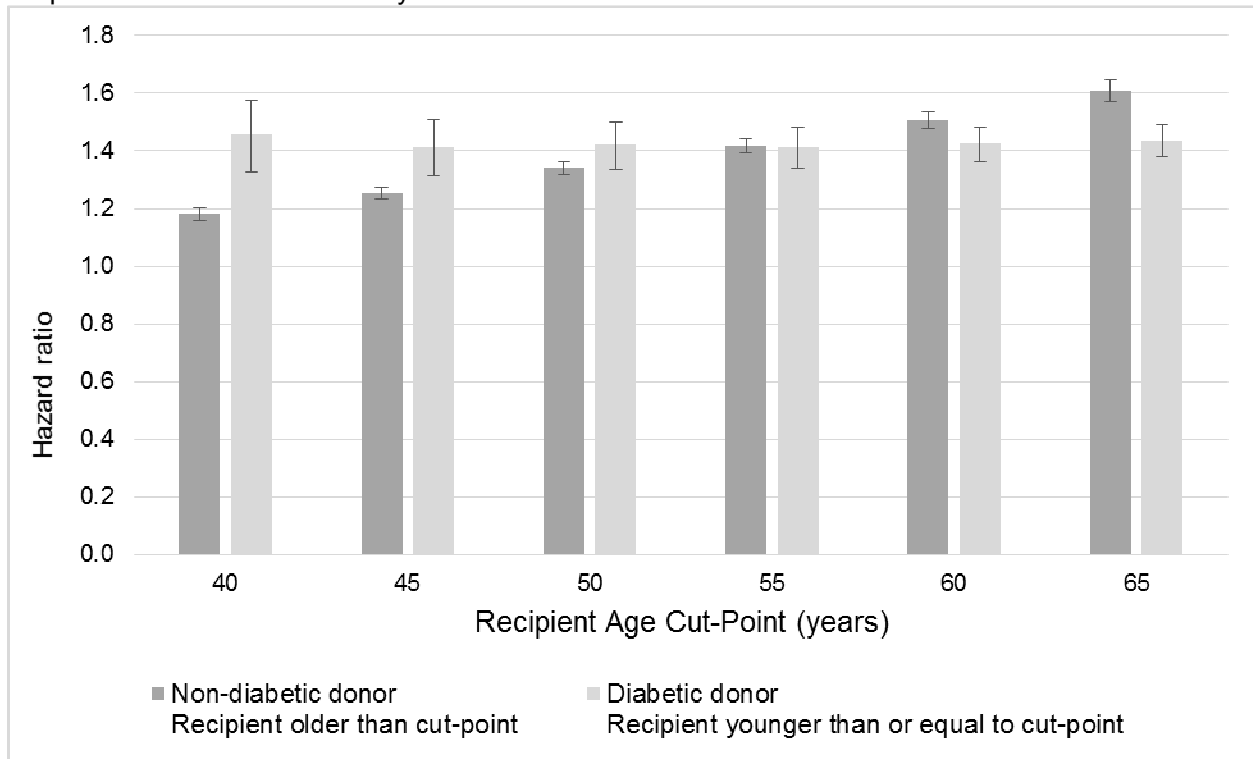


Figure S2a. Kaplan-Meier curve evaluating death-censored allograft failure in recipients of diabetic versus non-diabetic donor kidneys.

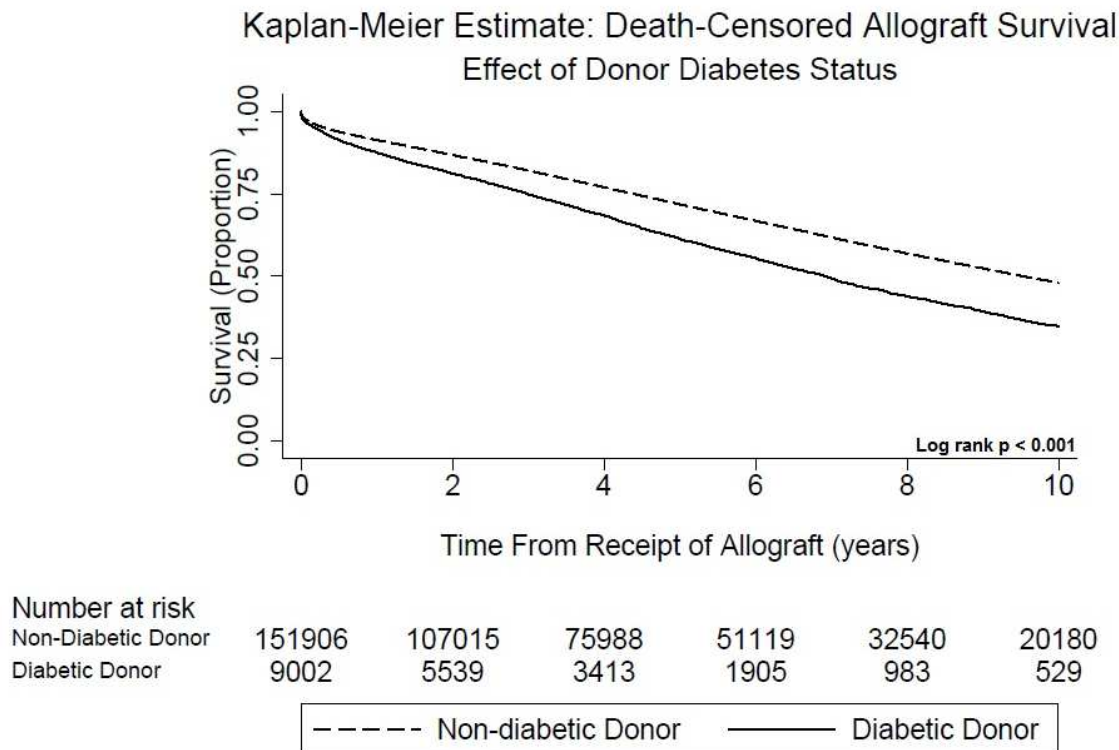


Figure S2b. Kaplan-Meier curve evaluating death-censored allograft failure in discordant mate-kidney recipients of diabetic and non-diabetic donor kidneys.

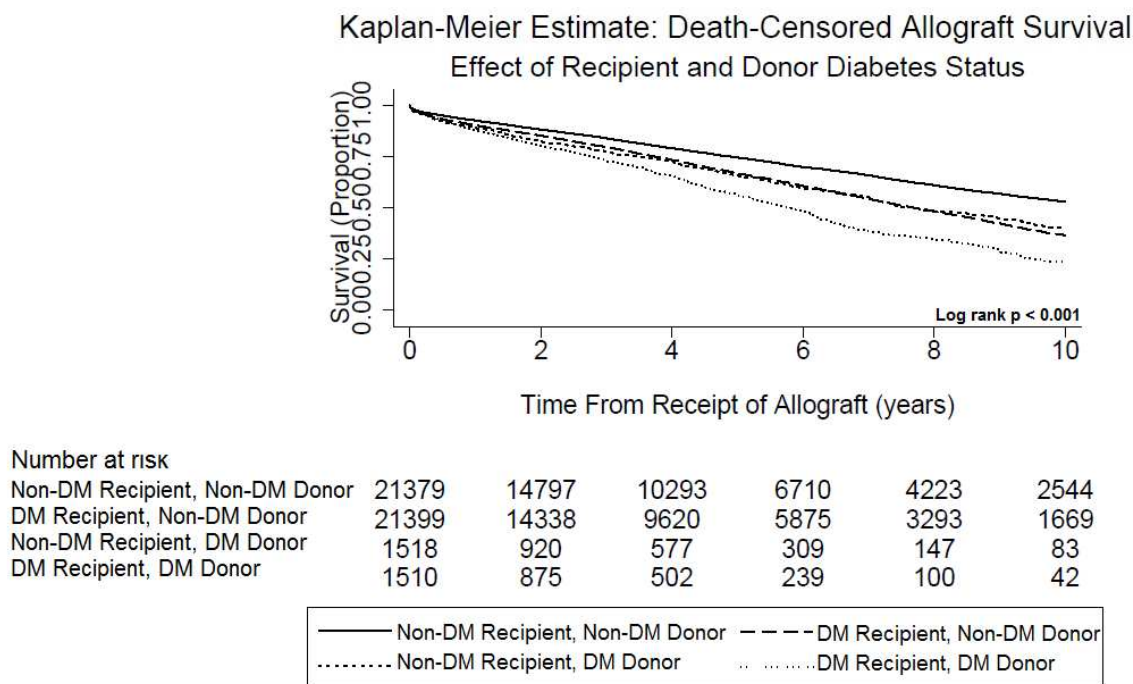


Table S1a. Cox proportional hazards model for time to death-censored allograft failure in recipients of diabetic vs. non-diabetic donor kidneys.

	Multivariable Analysis*				
	HR	SE	z	p-value	95% CI
Donor Characteristics					
Diabetes	1.174	0.022	8.57	< 0.001	1.132-1.218
ECD	1.560	0.017	39.89	< 0.001	1.527-1.595
Recipient Characteristics					
Age > 40	1.014	0.017	1.34	0.179	0.994-1.036
Male	1.068	0.011	7.07	< 0.001	1.048-1.087
African American Race	1.320	0.012	29.44	< 0.001	1.296-1.345
HCV+	1.461	0.024	23.49	< 0.001	1.416-1.508
Max PRA ≥30	1.114	0.013	11.23	< 0.001	1.111-1.162
Pre-Transplant Diabetes**	1.011	0.000	26.31	< 0.001	1.010-1.011
No Induction Immunosuppression	1.084	0.010	8.43	< 0.001	1.064-1.105

*Tacrolimus and the interaction term between tacrolimus and time were also included in the multivariable model

**Included as an interaction term along with duration of diabetes

Table S1b. Cox proportional hazards model for time to death-censored allograft failure in discordant diabetic vs. non-diabetic recipient pairs

	Multivariable Analysis*				
	HR	SE	z	p-value	95% CI
Non-Diabetic Donor					
Diabetic Recipient	1.500	0.044	13.71	< 0.001	1.415-1.589
Non-Diabetic Recipient	REF				
Diabetic Donor					
Diabetic Recipient	1.329	0.134	2.81	0.005	1.090-1.620
Non-Diabetic Recipient	REF				
Recipient Characteristics					
Age > 40	1.040	0.055	0.75	0.454	0.938-1.154
Male	1.039	0.043	0.92	0.358	0.958-1.127
African American Race	1.197	0.057	3.80	< 0.001	1.091-1.313
HCV+	1.136	0.105	1.38	0.167	0.948-1.362
Max PRA ≥30	1.236	0.070	3.76	< 0.001	1.107-1.380
No Induction Immunosuppression	1.075	0.056	1.39	0.166	0.971-1.190

*Tacrolimus and the interaction term between tacrolimus and time were also included in the multivariable model

Table S2a. Cox proportional hazards model for time to death in recipients of diabetic vs. non-diabetic donor kidneys: original combined multivariable model compared to the earlier era (1994-2003) and later era (2004-2013) of diabetic donor transplantation.

	Multivariable Analysis (combined eras)*			Multivariable Analysis (1994-2003 era)*			Multivariable Analysis (2004-2013 era)*		
	HR	p-value	95% CI	HR	p-value	95% CI	HR	p-value	95% CI
Donor Characteristics									
Diabetes	1.186	< 0.001	1.134-1.240	1.207	< 0.001	1.134-1.285	1.314	< 0.001	1.232-1.400
Recipient Characteristics									
Age > 40	1.995	< 0.001	1.935-2.056	2.001	< 0.001	1.934-2.071	2.370	< 0.001	2.215-2.536
Male	1.087	< 0.001	1.063-1.111	1.096	< 0.001	1.067-1.125	1.105	< 0.001	1.061-1.150
African American Race	1.069	< 0.001	1.044-1.095	1.110	< 0.001	1.078-1.142	0.981	0.358	0.941-1.022
Pre-Transplant Dialysis**	1.025	< 0.001	1.022-1.028	1.024	< 0.001	1.020-1.028	1.030	< 0.001	1.025-1.035
Prior Renal Transplant	1.154	< 0.001	1.111-1.198	1.054	0.025	1.007-1.103	1.036	0.333	0.965-1.112
HCV+	1.426	< 0.001	1.372-1.482	1.296	< 0.001	1.236-1.359	1.365	< 0.001	1.276-1.462
Pre-Transplant Diabetes**	1.020	< 0.001	1.020-1.021	1.021	< 0.001	1.020-1.022	1.020	< 0.001	1.018-1.021

Table S2b. Cox proportional hazards model for time to all-cause allograft failure in recipients of diabetic vs. non-diabetic donor kidneys: original combined multivariable model compared to the earlier era (1994-2003) and later era (2004-2013) of diabetic donor transplantation.

	Multivariable Analysis (combined eras)*			Multivariable Analysis (1994-2003 era)*			Multivariable Analysis (2004-2013 era)*		
	HR	p-value	95% CI	HR	p-value	95% CI	HR	p-value	95% CI
Donor Characteristics									
Diabetes	1.210	< 0.001	1.164-1.258	1.230	< 0.001	1.161-1.302	1.293	< 0.001	1.227-1.362
ECD	1.573	< 0.001	1.537-1.611	1.518	< 0.001	1.472-1.565	1.622	< 0.001	1.564-1.683
Recipient Characteristics									
Age > 40	1.008	0.505	0.985-1.031	1.094	< 0.001	1.065-1.124	0.930	< 0.001	0.893-0.969
Male	1.073	< 0.001	1.052-1.094	1.066	< 0.001	1.040-1.092	1.105	< 0.001	1.070-1.141
African American Race	1.333	< 0.001	1.306-1.359	1.354	< 0.001	1.320-1.389	1.295	< 0.001	1.254-1.336
HCV+	1.458	< 0.001	1.409-1.509	1.351	< 0.001	1.293-1.411	1.406	< 0.001	1.330-1.488
Max PRA ≥30	1.119	< 0.001	1.092-1.146	1.209	< 0.001	1.170-1.248	1.054	0.006	1.016-1.095
Pre-Transplant Diabetes**	1.012	< 0.001	1.012-1.013	1.013	< 0.001	1.012-1.015	1.010	< 0.001	1.009-1.012
No Induction Immunosuppression	1.116	< 0.001	1.093-1.139	0.965	0.003	0.942-0.988	1.243	< 0.001	1.197-1.292

Table S2c. Cox proportional hazards model for time to death in discordant diabetic vs. non-diabetic recipient pairs: original combined multivariable model compared to the earlier era (1994-2003) and later era (2004-2013) of diabetic donor transplantation.

	Multivariable Analysis (combined eras)*			Multivariable Analysis (1994-2003 era)*			Multivariable Analysis (2004-2013 era)*		
	HR	p-value	95% CI	HR	p-value	95% CI	HR	p-value	95% CI

Non-Diabetic Donor									
Diabetic Recipient	1.932	< 0.001	1.812-2.060	2.021	< 0.001	1.867-2.187	1.723	< 0.001	1.524-1.949
Non-Diabetic Recipient	REF			REF			REF		
Diabetic Donor									
Diabetic Recipient	1.532	< 0.001	1.218-1.927	1.465	0.030	1.037-2.070	1.319	0.127	0.924-1.882
Non-Diabetic Recipient	REF			REF			REF		
Recipient Characteristics									
Age > 40	1.928	< 0.001	1.698-2.189	1.812	< 0.001	1.569-2.092	2.237	< 0.001	1.664-3.008
Male	1.025	0.591	0.937-1.120	1.019	0.738	0.912-1.138	1.037	0.675	0.876-1.227
African American Race	0.954	0.386	0.858-1.061	0.948	0.450	0.828-1.088	1.006	0.952	0.829-1.221
Pre-Transplant Dialysis**	1.052	< 0.001	1.035-1.070	1.044	< 0.001	1.021-1.067	1.063	< 0.001	1.033-1.094
Prior Renal Transplant	1.200	0.031	1.017-1.417	1.125	0.261	0.916-1.382	1.154	0.379	0.839-1.588
HCV+	1.090	0.417	0.885-1.343	1.031	0.815	0.800-1.327	0.999	0.998	0.662-1.509

Table S2d. Cox proportional hazards model for time to all-cause allograft failure in discordant diabetic vs. non-diabetic recipient pairs: original combined multivariable model compared to the earlier era (1994-2003) and later era (2004-2013) of diabetic donor transplantation.

	Multivariable Analysis (combined eras)*			Multivariable Analysis (1994-2003 era)*			Multivariable Analysis (2004-2013 era)*		
	HR	p-value	95% CI	HR	p-value	95% CI	HR	p-value	95% CI
Non-Diabetic Donor									
Diabetic Recipient	1.445	< 0.001	1.367-1.527	1.549	< 0.001	1.440-1.666	1.276	< 0.001	1.161-1.401
Non-Diabetic Recipient	REF			REF			REF		
Diabetic Donor									
Diabetic Recipient	1.269	0.012	1.054-1.528	1.327	0.072	0.974-1.808	1.147	0.058	0.764-1.283
Non-Diabetic Recipient	REF			REF			REF		
Recipient Characteristics									
Age > 40	1.019	0.712	0.923-1.125	1.081	0.214	0.956-1.222	0.940	0.505	0.784-1.127
Male	1.061	0.134	0.982-1.146	1.036	0.499	0.935-1.148	1.088	0.204	0.955-1.240
African American Race	1.250	< 0.001	1.145-1.366	1.177	0.009	1.041-1.332	1.416	< 0.001	1.229-1.632
HCV+	1.114	0.222	0.936-1.326	1.093	0.435	0.874-1.368	1.004	0.977	0.740-1.362
Max PRA ≥30	1.226	< 0.001	1.104-1.361	1.293	0.001	1.116-1.499	1.162	-.077	0.984-1.372
No Induction Immunosuppression	1.083	0.108	0.983-1.193	0.977	0.693	0.869-1.098	1.201	0.057	0.995-1.450

*Tacrolimus and the interaction term between tacrolimus and time were also included in the multivariable model

**Included as an interaction term along with duration of dialysis or diabetes, as appropriate

Table S3a. One Year Allograft Survival by KDPI Allocation Group

KDPI	<20%	20-85%	>85%
Overall cohort	93.7	90.9	83.6
Non-DM donor, Non-DM recipient	94.7	92.1	84.8
Non-DM donor, DM recipient	92.8	89.6	83.8
DM donor, Non-DM recipient	92.9	91.1	83.1
DM donor, DM recipient	95.3	87.5	82.2

Table S3b. Two Year Allograft Survival by KDPI Allocation Group

KDPI	<20%	20-85%	>85%
Overall cohort	90.3	85.9	75.9
Non-DM donor, Non-DM recipient	91.8	87.5	77.3
Non-DM donor, DM recipient	88.5	84.3	75.6
DM donor, Non-DM recipient	85.9	85.4	75.6
DM donor, DM recipient	86.4	80.6	73.8

Table S3c. Five Year Allograft Survival by KDPI Allocation Group

KDPI	<20%	20-85%	>85%
Overall cohort	77.4	69.8	55.3
Non-DM donor, Non-DM recipient	80.1	73.2	59.7
Non-DM donor, DM recipient	72.8	65.2	50.3
DM donor, Non-DM recipient	75.8	67.1	54.5
DM donor, DM recipient	76.9	57.7	50.9

Table S3d. Ten Year Allograft Survival by KDPI Allocation Group

KDPI	<20%	20-85%	>85%
Overall cohort	54.8	44.8	29.0
Non-DM donor, Non-DM recipient	60.4	50.8	34.2
Non-DM donor, DM recipient	43.0	33.3	20.2
DM donor, Non-DM recipient	55.3	41.3	29.0
DM donor, DM recipient	45.9	23.6	17.0

Log rank $p < 0.001$ and log rank test for trend $p < 0.001$ for the overall duration of follow up.

Table S4a. Cox proportional hazards model for time to death in recipients of diabetic vs. non-diabetic donor kidneys: original multivariable results compared to using multiple imputation

	Multivariable Analysis*			Multivariable Analysis (after Multiple Imputation)*		
	HR	p-value	95% CI	HR	p-value	95% CI
Donor Characteristics						
Diabetes	1.186	< 0.001	1.134-1.240	1.177	< 0.001	1.132-1.222
Recipient Characteristics						
Age > 40	1.995	< 0.001	1.935-2.056	1.981	< 0.001	1.932-2.032
Male	1.087	< 0.001	1.063-1.111	1.107	< 0.001	1.087-1.128
African American Race	1.069	< 0.001	1.044-1.095	1.077	< 0.001	1.056-1.098
Pre-Transplant Dialysis**	1.025	< 0.001	1.022-1.028	1.024	< 0.001	1.022-1.027
Prior Renal Transplant	1.154	< 0.001	1.111-1.198	1.125	< 0.001	1.092-1.158
HCV+	1.426	< 0.001	1.372-1.482	1.372	< 0.001	1.327-1.419
Pre-Transplant Diabetes**	1.020	< 0.001	1.020-1.021	1.017	< 0.001	1.016-1.018

Table S4b. Cox proportional hazards model for time to all-cause allograft failure in recipients of diabetic vs. non-diabetic donor kidneys: original multivariable results compared to using multiple imputation

	Multivariable Analysis*			Multivariable Analysis (after Multiple Imputation)*		
	HR	p-value	95% CI	HR	p-value	95% CI
Donor Characteristics						
Diabetes	1.210	< 0.001	1.164-1.258	1.187	< 0.001	1.148-1.229
ECD	1.573	< 0.001	1.537-1.611	1.568	< 0.001	1.536-1.600
Recipient Characteristics						
Age > 40	1.008	0.505	0.985-1.031	1.036	< 0.001	1.016-1.056
Male	1.073	< 0.001	1.052-1.094	1.083	< 0.001	1.065-1.101
African American Race	1.333	< 0.001	1.306-1.359	1.318	< 0.001	1.296-1.341
HCV+	1.458	< 0.001	1.409-1.509	1.417	< 0.001	1.374-1.462
Max PRA ≥30	1.119	< 0.001	1.092-1.146	1.137	< 0.001	1.114-1.161
Pre-Transplant Diabetes**	1.012	< 0.001	1.012-1.013	1.010	< 0.001	1.009-1.011
No Induction Immunosuppression	1.116	< 0.001	1.093-1.139	1.119	< 0.001	1.100-1.138

Table S4c. Cox proportional hazards model for time to death in discordant diabetic vs. non-diabetic recipient pairs: original multivariable results compared to using multiple imputation

	Multivariable Analysis*			Multivariable Analysis (after Multiple Imputation)*		
	HR	p-value	95% CI	HR	p-value	95% CI
Non-Diabetic Donor						
Diabetic Recipient	1.932	< 0.001	1.812-2.060	1.911	< 0.001	1.806-2.024

Non-Diabetic Recipient	REF			REF		
Diabetic Donor						
Diabetic Recipient	1.532	< 0.001	1.218-1.927	1.584	< 0.001	1.474-1.693
Non-Diabetic Recipient	REF			REF		
Recipient Characteristics						
Age > 40	1.928	< 0.001	1.698-2.189	1.890	< 0.001	1.688-2.116
Male	1.025	0.591	0.937-1.120	1.062	0.141	0.980-1.149
African American Race	0.954	0.386	0.858-1.061	0.976	0.609	0.887-1.072
Pre-Transplant Dialysis**	1.052	< 0.001	1.035-1.070	1.048	< 0.001	1.033-1.064
Prior Renal Transplant	1.200	0.031	1.017-1.417	1.220	0.007	1.055-1.410
HCV+	1.090	0.417	0.885-1.343	1.052	0.626	0.856-1.293

Table S4d. Cox proportional hazards model for time to all-cause allograft failure in discordant diabetic vs. non-diabetic recipient pairs: original multivariable results compared to using multiple imputation

	Multivariable Analysis*			Multivariable Analysis (after Multiple Imputation)*		
	HR	p-value	95% CI	HR	p-value	95% CI
Non-Diabetic Donor						
Diabetic Recipient	1.445	< 0.001	1.367-1.527	1.458	< 0.001	1.386-1.534
Non-Diabetic Recipient	REF			REF		
Diabetic Donor						
Diabetic Recipient	1.269	0.012	1.054-1.528	1.250	0.011	1.053-1.484
Non-Diabetic Recipient	REF			REF		
Recipient Characteristics						
Age > 40	1.019	0.712	0.923-1.125	0.991	0.842	0.905-1.085
Male	1.061	0.134	0.982-1.146	1.073	0.052	0.999-1.152
African American Race	1.250	< 0.001	1.145-1.366	1.207	< 0.001	1.113-1.309
HCV+	1.114	0.222	0.936-1.326	1.044	0.578	0.896-1.217
Max PRA ≥30	1.226	< 0.001	1.104-1.361	1.230	< 0.001	1.117-1.355
No Induction Immunosuppression	1.083	0.108	0.983-1.193	1.061	0.186	0.972-1.579

*Tacrolimus and the interaction term between tacrolimus and time were also included in the multivariable model

**Included as an interaction term along with duration of dialysis or diabetes, as appropriate