Supplemental Material

Supplemental Table 1. Baseline characteristics of patients who were lost to follow up compared to those who continued the study.

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Supplemental Table 1. Baseline characteristics of patients who were lost to follow up compared to those who continued the study.

Baseline characteristics	**Attended follow up**	**Lost to follow up**			***P* value***
	All=306 (68%)	**All=141 (32%)**	**Donors n=78**	**Controls n=63**	
Living kidney donor	168 (55)	78 (55)			0.93
Sex (male)	135 (44)	50 (35)	28 (36)	22 (35)	0.40
Age (years)	50 ± 13	47 ± 13	50 ± 12	44 ± 12	0.05
Race	Caucasian=285 (93) Non-white=17 (6) Unknown=4 (1)	Caucasian=108 (77) Non-white=17 (12) Unknown=16 (11)	Caucasian=64 (82) Non-white=4 (5) Unknown=10 (13)	Caucasian=44 (70) Non-white=13 (21) Unknown=6 (9)	**0.04**
Weight (kg)	75.1 ± 13.6	76.4 ± 13.6	77.2 ± 13	75.2 ± 13	0.38
eGFR (ml/min/1.73^2)	93 ± 15	97 ± 15	96 ± 15	99 ± 14	**0.008**
History of hypertension	26 (9)	9 (6)	7 (9)	2 (3)	0.08
Anti-hypertensive usage	27 (19)	8 (6)	6 (8)	2 (3)	**0.04**
Current or ex-smoker	112 (37)	68 (48)	39 (50)	29 (46)	**0.006**
ACE/ARB usage	8 (3)	2 (1)	1	1	0.29
Calcium channel blocker usage	10 (3)	4 (3)	3 (4)	1 (1)	0.62

ACE; Angiotensin Converting Enzyme. ARB; Angiotensin receptor blocker. eGFR; estimated glomerular filtration rate.

* A comparison was made between all those lost to follow up n=141 compared to all those who followed up n=306.Categorical variables are presented as n (valid %) and were analysed using Chi squared tests. Continuous data are represented as mean ± standard deviation if normally distributed and were analysed using independent samples *t*-tests.

Supplemental Table 2. Baseline patient demographics of the whole cohort recruited.

Variable Sample size =n	**Controls**	**Donors**	***P* value †**
Male sex Donors n=246 Controls n=201	79 (39)	106 (43)	0.40
Age, years Donors n=239 Controls n=195	47 ± 14	51 ± 12	**0.003**
Race Donors n=246 Controls n=201	Caucasian=171 (85) Non-white=21 (10) Unknown= 9 (5)	Caucasian=222 (90) Non-white=13 (5) Unknown=11 (5)	**0.04**
Previous history of hypertension Donors n=232 Controls n=194	11 (6)	24 (10)	0.08
Anti-hypertensive usage Donors n=173 Controls n=159	11 (7)	24 (14)	**0.04**
ACE/ARB usage Donors n=246 Controls n=201	5 (2)	7 (3)	0.67
Calcium channel blocker usage Donors n=246 Controls n=201	5 (2)	9 (4)	0.62
eGFR (ml/min/1.73^2) ‡ Donors n=231 Controls n=181	96 ± 15	93 ±15	**0.04**
Weight, kg Donors n=237 Controls n=193	74.8 ± 13.8	76 ± 13.5	0.38
Current or ex-smoker Donors n=246 Controls n=193	67 (33)	113 (46)	**0.007**
Normalised isotopic GFR (ml/min/1.73m^2) Donors n=115 Controls n=24	89 ± 13	89 ± 12	0.88

ACE; Angiotensin Converting Enzyme. ARB; Angiotensin receptor blocker. CKD; Chronic Kidney Disease. eGFR; Estimated Glomerular Filtration Rate.

447 participants recruited into the study with valid data sets are represented.
† Categorical variables are presented as n (valid %) and were analysed using Chi squared tests for categorical variables. Continuous data are represented as mean ± standard deviation if normally distributed and were analysed using independent samples *t*-tests.
‡ eGFR was calculated using the Chronic Kidney Disease Epidemiology Collaboration (CKD-EPI) equation (2009).

Supplemental Table 3. Baseline biochemical and haemodynamic characteristics of the whole cohort recruited.*

Variable	Controls	Donors	*P* value †
Sodium (meq/L) Donors n=232 Controls n=184	141 ± 2	140 ± 2	0.15
Potassium (meq/L) Donors n=231 Controls n=183	4.2 ± 0.3	4.3 ± 0.3	**0.04**
Urea (mg/dL) Donors n=232 Controls n=184	30 ± 8	30 ± 8	0.66
Creatinine (mg/dL) Donors n=232 Controls n=182	0.8 ± 0.2	0.8 ± 0.2	0.29
Albumin (g/dL) Donors n=217 Controls n=183	4.6 ± 0.5	4.3 ± 0.4	**0.006**
Corrected calcium (mg/dL) Donors n=217 Controls n=183	9.2 ± 0.4	9.2 ± 0.4	0.24
Phosphate (mg/dL) Donors n=198 Controls n=175	3.4 ± 0.6	3.4 ± 0.6	0.15
Magnesium (mg/dL) Donors n=123 Controls n=114	2.8 ± 0.3	2.8 ± 0.3	0.64
Uric acid (mg/dL) Donors n=121 Controls n=127	4.8 ± 1.1	5.0 ± 1.2	0.18
Urine albumin: creatinine ratio (mg/g) Donors n=126 Controls n=125	27 ± 57	25 ± 47	0.78
Seated office systolic BP (mmHg) Donors n=234 Controls n=195	125 ± 16	126 ± 14	0.64
Seated office diastolic BP (mmHg) Donors n=233 Controls n=194	77 ± 10	78 ± 9	0.19
Ambulatory day systolic BP (mmHg) Donors n=174 Controls n=158	123 ± 10	124 ± 10	0.56
Ambulatory day diastolic BP (mmHg)	78 ± 9	79 ± 8	0.36

Donors n=174 Controls n=158			
Ambulatory day heart rate (bpm) Donors n=109 Controls n=124	73 ± 9	74 ± 11	0.49
Ambulatory night systolic BP (mmHg) Donors n=169 Controls n=156	111 ± 12	112 ± 11	0.74
Ambulatory night diastolic BP (mmHg) Donors n=169 Controls n=156	67 ± 8	67 ± 9	0.57
Central systolic BP (mmHg) Donors n=142 Controls n=148	110 ± 16	113 ± 13	**0.04**
Central diastolic BP (mmHg) Donors n=142 Controls n=148	75 ± 10	77 ± 8	0.06
Augmentation index, corrected for heart rate (%) Donors n=140 Controls n=148	20 ± 13	23 ± 15	0.10
Adjusted carotid-femoral pulse wave velocity (m/s) Donors n=200 Controls n=174	6.9 ± 1.3	7.0 ± 1.4	0.66

BPM; Beats per minute. BP; Blood Pressure, CI; Confidence interval.

*447 participants recruited into the study with valid data sets are represented.
† Continuous data are represented as mean ± standard deviation if normally distributed. Independent samples *t*-tests (controls vs. donors) were used to compare variables at baseline between donors and controls.

Supplemental Table 4. Linear regression model: Association between 12-month change in adjusted pulse wave velocity and kidney donation, age, sex and smoking status.

	Univariable analysis				Multivariable analysis			
	β	**CI**		***P***	**β**	**CI**		***P***
Donor	0.083	-0.155	0.323	0.49	0.098	-0.147	0.343	0.43
Age (years) at baseline	-0.003	-0.012	0.005	0.48	-0.003	-0.012	0.005	0.47
Female	-0.067	-0.307	0.172	0.57	-0.074	-0.318	0.170	0.55
Current or ex-smoker at baseline	-0.065	-0.312	0.182	0.60	-0.089	-0.345	0.165	0.49

β;Beta coefficient; CI; Confidence interval. PWV; Pulse wave velocity.

Multivariable analysis shows mutually adjusted coefficients for each independent variable.

Coefficients are given per unit change e.g. per year for age. Linear regression was used for all participants with both baseline and follow up data for PWV i.e. change in PWV (Living kidney donors n=168, Controls n=138). Pulse wave velocity has been adjusted for mean heart rate and mean arterial pressure as previously described. Variables chosen for the multivariable model were based on clinical relevance and known factors influencing PWV.