

**Table S1. Predictors of Extracellular Volume Status (Percentage Volume Expansion, %VE)**

	Univariate Analysis		Multivariate Analysis <sup>§</sup>	
	Regression Coefficient (95% CI <sup>¶</sup> )	p-value	Regression Coefficient (95% CI <sup>¶</sup> )	p-value
(***) Sodium intake (mg)	1.8 (1.3, 2.3)	<0.001	1.7 (1.2, 2.4)	<0.001
(***) Fluid intake (mL)	1.4 (0.6, 2.0)	<0.001		
(**) Age (years)	1.9 (0.9, 2.8)	<0.001	1.8 (1.0, 2.6)	<0.001
<b>Presence of diabetes</b>				
Non-diabetic	0	<0.001		
NODAT	2.4 (-1.2, 5.9)			
Pre-DM	10.3 (6.0, 14.7)			
<b>Gender</b>				
Female	0	0.002		
Male	4.3 (1.6, 7.0)			
<b>Use of ACEI / ARB</b>				
No	0	0.01		
Yes	3.6 (0.9, 6.3)			
Number of antihypertensive medications	1.6 (0.1, 3.2)	0.04		
Alb (g/L)	-0.4 (-0.8, 0.1)	0.11		
<b>Use of diuretic (furosemide)</b>				
No	0	0.11		
Yes	3.5 (-0.8, 7.8)			
(*) FTI (kg/m <sup>2</sup> )	-1.0 (-2.0, 0.5)	0.12	-1.4 (-2.2, -0.5)	0.002
(*) eGFR (mL/min)	-0.3 (-0.6, 0.1)	0.19		
(†) ACR (mg/mmol)	0.5 (-0.4, 1.4)	0.27		
<sup>‡</sup> Ethnicity				
Caucasian	0	0.29		
Non-Caucasian	-1.8 (-5.1, 1.5)			
<b>Use of prednisolone</b>				
No	0	0.29		
Yes	-1.8 (-5.1, 1.6)			
(*) LTI (kg/m <sup>2</sup> )	-0.2 (-0.7, 0.2)	0.31		
<sup>†</sup> Smoking status				
Never smoked	0	0.32		
Ex-smoker / Current smoker	0.1 (-1.4, 4.3)			
<b>Use of BAB</b>				
No	0	0.34		
Yes	0.2 (-1.3, 3.9)			
<b>Use of CCB</b>				
No	0	0.34		
Yes	0.1 (-1.5, 4.1)			
Hb (g/dL)	-0.4 (-1.3, 0.5)	0.44		
<b>Use of AAB</b>				
No	0	0.52		
Yes	0.1 (-2.0, 3.9)			
(*) Time post transplantation (years)	0.2 (-0.9, 1.3)	0.76		
<b>Use of calcineurin inhibitor</b>				
No	0	0.85		
Yes	-0.3, (-3.7, 3.1)			
(†) hsCRP (mg/L)	0.1 (-1.3, 1.4)	0.94		
<b>Previous episodes of acute rejection</b>				
No	0	0.95		
Yes	-0.1 (-3.4, 3.2)			
<b>Use of adjunctive antiproliferative agents</b>				
No	0	0.99		
Yes	-0.0 (-4.6, 4.5)			
<b>R<sup>2</sup> value from final model</b>		51%		

<sup>§</sup>Results in the final multivariate regression model were presented.

<sup>¶</sup>CI = Confidence Interval.

<sup>†</sup>For the purpose of statistical analysis, smoking status was arranged into 2 categories, "non-smoker" versus "the combination of current smoker and ex-smoker", 63% and 37% of patients respectively.

<sup>‡</sup>For the purpose of statistical analysis, the ethnicity of patients classified as "Afro-Caribbean", "Asian" and "Others" was grouped as "Non-Caucasian", 77% "Caucasian" versus 23% "Non-Caucasian".

(\*) Coefficients reported for a 5-unit increase in explanatory variable.

(\*\*) Coefficients reported for a 10-unit increase in explanatory variable.

(\*\*\*) Coefficients reported for a 50-unit increase in explanatory variable.

(†) Variable analysed on the log scale (base 10).

Abbreviations: %VE=Percentage Volume Expansion; NODAT=New Onset Diabetes After Transplantation; Pre-DM=Presence of Diabetes Mellitus pre-transplantation; ACEI=Angiotensin-Converting-Enzyme Inhibitor; ARB=Angiotensin-Receptor Blocker; Alb=Albumin; FTI=Fat Tissue Index; eGFR=estimated Glomerular Filtration Rate; ACR=Albumin : Creatinine Ratio; LTI=Lean Tissue Index; BAB=Beta-Adrenergic Blocker; CCB=Calcium Channel Blocker; Hb=Haemoglobin; AAB=Alpha-Adrenergic Blocker; hsCRP=high-sensitivity C-Reactive Protein.

**Table S2. Predictors of Mean Arterial Pressure (MAP)**

	Univariate Analysis		Multivariate Analysis <sup>§</sup>	
	Regression Coefficient (95% CI <sup>¶</sup> )	p-value	Regression Coefficient (95% CI <sup>¶</sup> )	p-value
(*) %VE	6.6 (5.6, 7.5)	<0.001	6.6 (5.6, 7.6)	<0.001
(***) Sodium intake (mg)	0.3 (0.2, 0.4)	<0.001		
(**) Age (years)	2.5 (0.9, 4.1)	<0.01		
<b>Presence of diabetes</b>				
Non-diabetic	0	<0.01		
NODAT	5.6 (2.1, 9.0)			
Pre-DM	11.2 (2.8, 19.5)			
<b>Use of ACEI / ARB</b>				
No	0	<0.01		
Yes	6.7 (2.1, 11.3)			
Alb (g/L)	-0.9 (-1.7, -0.2)	0.01		
<b>Gender</b>				
Female	0	0.02		
Male	5.8 (1.1, 10.4)			
(***) Fluid intake (mL)	0.2 (0.0, 0.3)	0.03		
Number of antihypertensive medications	2.7 (0.0, 5.4)	0.05		
<sup>‡</sup> Ethnicity				
Caucasian	0	0.08		
Non-Caucasian	5.0 (-0.5, 11.0)			
(*) Time post transplantation (years)	1.2 (-0.6, 2.9)	0.18		
(*) FTI (kg/m <sup>2</sup> )	1.3 (-3.1, 0.6)	0.19		
<b>Use of calcineurin inhibitor</b>				
No	0	0.22		
Yes	3.6 (-2.2, 9.3)			
<b>Use of diuretic (furosemide)</b>				
No	0	0.23		
Yes	4.0 (-2.5, 10.5)			
<b>Use of prednisolone</b>				
No	0	0.38		
Yes	-2.5 (-8.1, 3.1)			
<b>Use of CCB</b>				
No	0	0.39		
Yes	2.1 (-2.7, 6.8)			
<b>Use of BAB</b>				
No	0	0.41		
Yes	3.2 (-2.9, 6.2)			
(*) eGFR (mL/min)	-0.2 (-0.9, 0.5)	0.54		
Hb (g/dL)	-0.5 (-2.0, 1.1)	0.56		
<b>Use of adjunctive antiproliferative agents</b>				
No	0	0.56		
Yes	2.2 (-5.3, 9.7)			
<b>Use of AAB</b>				
No	0	0.56		
Yes	1.5 (-3.5, 6.5)			
<sup>†</sup> Smoking status				
Never smoked	0	0.57		
Ex-smoker / Current smoker	1.4 (-3.5, 6.3)			
LTI (kg/m <sup>2</sup> )	-0.2 (-1.0, 0.6)	0.63		
( <sup>†</sup> ) hsCRP (mg/L)	1.1 (-3.8, 5.9)	0.66		
( <sup>†</sup> ) ACR (mg/mmol)	0.6 (-3.0, 4.3)	0.72		
<b>Previous episodes of acute rejection</b>				
No	0	0.86		
Yes	-0.5 (-6.1, 5.1)			
<b>R<sup>2</sup> value from final model</b>		62%		

<sup>§</sup>Results in the final multivariate regression model were presented.

<sup>¶</sup>CI = Confidence Interval.

<sup>†</sup>For the purpose of statistical analysis, smoking status was arranged into 2 categories, “non-smoker” versus “the combination of current smoker and ex-smoker”, 63% and 37% of patients respectively.

<sup>‡</sup>For the purpose of statistical analysis, the ethnicity of patients classified as “Afro-Caribbean”, “Asian” and “Others” was grouped as “Non-Caucasian”, 77% “Caucasian” versus 23% “Non-Caucasian”.

(\*) Coefficients reported for a 5-unit increase in explanatory variable.

(\*\*) Coefficients reported for a 10-unit increase in explanatory variable.

(\*\*\*) Coefficients reported for a 50-unit increase in explanatory variable.

(<sup>†</sup>) Variable analysed on the log scale (base 10).

Abbreviations: %VE=Percentage Volume Expansion; NODAT=New Onset Diabetes After Transplantation; Pre-DM=Presence of Diabetes Mellitus pre-transplantation; ACEI=Angiotensin-Converting-Enzyme Inhibitor; ARB=Angiotensin-Receptor Blocker; Alb=Albumin; FTI=Fat Tissue Index; CCB=Calcium Channel Blocker; BAB=Beta-Adrenergic Blocker; eGFR=estimated Glomerular Filtration Rate; Hb=Haemoglobin; AAB=Alpha-Adrenergic Blocker; LTI=Lean Tissue Index; hsCRP=high-sensitivity C-Reactive Protein; ACR=Albumin : Creatinine Ratio.

**Table S3. Predictors of Systolic Blood Pressure (SBP)**

	Univariate Analysis		Multivariate Analysis <sup>§</sup>	
	Regression Coefficient (95% CI <sup>¶</sup> )	p-value	Regression Coefficient (95% CI <sup>¶</sup> )	p-value
(***) Sodium intake (mg)	0.4 (0.3, 0.6)	<0.001		
(***) Fluid intake (mL)	0.2 (0.1, 0.4)	<0.001		
(**) Age (years)	4.2 (2.0, 6.3)	<0.001		
(*) %VE	9.7 (8.4, 11.0)	<0.001	9.8 (8.5, 11.0)	<0.001
<b>Presence of diabetes</b>				
Non-diabetic	0	<0.001		
NODAT	9.2 (4.3, 14.0)			
Pre-DM	23.9 (12.7, 35.0)			
<b>Use of ACEI / ARB</b>				
No	0	<0.01		
Yes	9.3 (2.8, 15.8)			
<b>Gender</b>				
Female	0	0.02		
Male	8.1 (1.5, 14.6)			
Alb (g/L)	-1.1 (-2.2, -0.1)	0.03		
Number of antihypertensive medications	3.3 (-0.5, 7.0)	0.09		
<sup>‡</sup> Ethnicity				
Caucasian	0	0.20		
Non-Caucasian	5.2 (2.7, 13.1)			
(*) FTI (kg/m <sup>2</sup> )	-1.6 (-4.2, 1.1)	0.24		
( <sup>l</sup> ) ACR (mg/mmol)	2.9 (-2.1, 8.0)	0.25		
<b>Use of diuretic (furosemide)</b>				
No	0	0.28		
Yes	-4.4 (-12.3, 3.5)			
<b>Use of prednisolone</b>				
No	0	0.28		
Yes	-4.4 (-12.3, 3.5)			
LTI (kg/m <sup>2</sup> )	-0.6 (-1.8, 0.5)	0.28		
(*) Time post transplantation (years)	1.2 (-1.2, 3.7)	0.31		
Hb (g/dL)	-0.9 (-3.1, 1.3)	0.42		
<b>Use of calcineurin inhibitor</b>				
No	0	0.53		
Yes	2.6 (-5.6, 10.7)			
<b>Use of BAB</b>				
No	0	0.55		
Yes	-2.1 (-4.4, 7.2)			
<b>Previous episodes of acute rejection</b>				
No	0	0.56		
Yes	-2.4 (-10.3, 5.6)			
<b>Use of CCB</b>				
No	0	0.62		
Yes	1.7 (-5.0, 8.4)			
<sup>†</sup> Smoking status				
Never smoked	0	0.69		
Ex-smoker / Current smoker	1.4 (-5.5, 8.3)			
(*) eGFR (mL/min)	-0.2 (-1.2, 0.8)	0.71		
<b>Use of AAB</b>				
No	0	0.74		
Yes	1.2 (-5.9, 8.3)			
( <sup>l</sup> ) hsCRP (mg/L)	0.9 (-6.0, 7.8)	0.80		
<b>Use of adjunctive antiproliferative agents</b>				
No	0	0.95		
Yes	0.4 (-10.2, 11.0)			
<b>R<sup>2</sup> value from final model</b>		69%		

<sup>§</sup>Results in the final multivariate regression model were presented.

<sup>¶</sup>CI = Confidence Interval.

<sup>‡</sup>For the purpose of statistical analysis, smoking status was arranged into 2 categories, “non-smoker” versus “the combination of current smoker and ex-smoker”, 63% and 37% of patients respectively.

<sup>\*</sup>For the purpose of statistical analysis, the ethnicity of patients classified as “Afro-Caribbean”, “Asian” and “Others” was grouped as “Non-Caucasian”, 77% “Caucasian” versus 23% “Non-Caucasian”.

(\*) Coefficients reported for a 5-unit increase in explanatory variable.

(\*\*) Coefficients reported for a 10-unit increase in explanatory variable.

(\*\*\*) Coefficients reported for a 50-unit increase in explanatory variable.

(<sup>l</sup>) Variable analysed on the log scale (base 10).

Abbreviations: %VE=Percentage Volume Expansion; NODAT=New Onset Diabetes After Transplantation; Pre-DM=Presence of Diabetes Mellitus pre-transplantation;

ACEI=Angiotensin-Converting-Enzyme Inhibitor; ARB=Angiotensin-Receptor Blocker; Alb=Albumin; FTI=Fat Tissue Index; ACR=Albumin : Creatinine Ratio; LTI= Lean Tissue Index; Hb=Haemoglobin; BAB=Beta-Adrenergic Blocker; CCB=Calcium Channel Blocker; eGFR=estimated Glomerular Filtration Rate; AAB=Alpha-Adrenergic Blocker; hsCRP=high-sensitivity C-Reactive Protein.

**Table S4. Predictors of Diastolic Blood Pressure (DBP)**

	Univariate Analysis		Multivariate Analysis <sup>§</sup>	
	Regression Coefficient (95% CI <sup>¶</sup> )	p-value	Regression Coefficient (95% CI <sup>¶</sup> )	p-value
(*) %VE	5.0 (3.7, 6.2)	<0.001	4.9 (3.7, 6.2)	<0.001
(***) Sodium intake (mg)	0.2 (0.1, 0.3)	<0.01		
<b>Use of ACEI / ARB</b>				
No	0	0.02		
Yes	5.3 (0.7, 9.9)			
Alb (g/L)	-0.8 (-1.5, -0.1)	0.03		
(**) Age (years)	1.7 (0.1, 3.3)	0.04		
<b>Presence of diabetes</b>				
Non-diabetic	0	0.04		
NODAT	3.7 (0.2, 7.2)			
Pre-DM	4.9 (-3.6, 13.4)			
<b>Gender</b>				
Female	0	0.05		
Male	4.7 (0.0, 9.3)			
<sup>‡</sup> Ethnicity				
Caucasian	0	0.08		
Non-Caucasian	4.9 (-0.6, 10.4)			
Number of antihypertensive medications	2.4 (-0.3, 5.0)	0.08		
(***) Fluid intake (mL)	0.1 (-0.1, 0.2)	0.16		
<b>Use of BAB</b>				
No	0	0.16		
Yes	2.8 (-3.1, 4.8)			
<b>Use of calcineurin inhibitor</b>				
No	0	0.16		
Yes	4.0 (-1.7, 9.6)			
(*) Time post transplantation (years)	1.1 (-0.6, 5.6)	0.21		
<sup>†</sup> Smoking status				
Never smoked	0	0.23		
Ex-smoker / Current smoker	2.9 (-1.9, 7.7)			
(*) FTI (kg/m <sup>2</sup> )	-1.1 (-3.0, 0.7)	0.24		
<b>Use of CCB</b>				
No	0	0.34		
Yes	2.3 (-2.4, 7.0)			
<b>Use of adjunctive antiproliferative agents</b>				
No	0	0.39		
Yes	3.2 (-4.1, 10.6)			
(*) eGFR (mL/min)	-0.2 (-0.9, 0.5)	0.50		
<b>Use of AAB</b>				
No	0	0.53		
Yes	1.6 (-3.3, 6.5)			
<b>Use of diuretic (furosemide)</b>				
No	0	0.58		
Yes	1.8 (-4.6, 8.2)			
<b>Use of prednisolone</b>				
No	0	0.59		
Yes	-1.5 (-7.1, 4.0)			
( <sup>t</sup> ) hsCRP (mg/L)	1.2 (-3.6, 6.0)	0.62		
( <sup>t</sup> ) ACR (mg/mmol)	-0.6 (-4.1, 3.0)	0.75		
Hb (g/dL)	-0.2 (-1.7, 1.3)	0.77		
<b>Previous episodes of acute rejection</b>				
No	0	0.87		
Yes	0.4 (-5.1, 6.0)			
LTI (kg/m <sup>2</sup> )	0.0 (-0.8, 0.8)	0.91		
<b>R<sup>2</sup> value from final model</b>		35%		

<sup>§</sup>Results in the final multivariate regression model were presented.

<sup>¶</sup>CI = Confidence Interval.

<sup>†</sup>For the purpose of statistical analysis, smoking status was arranged into 2 categories, “non-smoker” versus “the combination of current smoker and ex-smoker”, 63% and 37% of patients respectively.

<sup>‡</sup>For the purpose of statistical analysis, the ethnicity of patients classified as “Afro-Caribbean”, “Asian” and “Others” was grouped as “Non-Caucasian”, 77% “Caucasian” versus 23% “Non-Caucasian”.

(\*) Coefficients reported for a 5-unit increase in explanatory variable.

(\*\*) Coefficients reported for a 10-unit increase in explanatory variable.

(\*\*\*) Coefficients reported for a 50-unit increase in explanatory variable.

(<sup>t</sup>) Variable analysed on the log scale (base 10).

Abbreviations: %VE=Percentage Volume Expansion; ACEI=Angiotensin-Converting-Enzyme Inhibitor; ARB=Angiotensin-Receptor Blocker; Alb=Albumin; NODAT>New Onset Diabetes After Transplantation; Pre-DM=Presence of Diabetes Mellitus pre-transplantation; BAB=Beta-Adrenergic Blocker; FTI=Fat Tissue Index; CCB=Calcium Channel Blocker; eGFR=estimated Glomerular Filtration Rate; AAB=Alpha-Adrenergic Blocker; hsCRP=high-sensitivity C-Reactive Protein; ACR=Albumin : Creatinine Ratio; Hb=Haemoglobin; LTI=Lean Tissue Index.

**Table S5. Predictors of N-Terminal of prohormone B-type Natriuretic Peptide (NT-proBNP)**

	Univariate Analysis		Multivariate Analysis <sup>§</sup>	
	Ratio (95% CI <sup>¶</sup> )	p-value	Ratio (95% CI <sup>¶</sup> )	p-value
(*) %VE	1.38 (1.07, 1.78)	0.01	1.16 (1.03, 1.29)	0.01
(*) eGFR (mL/min)	0.89 (0.80, 0.99)	0.03	0.95 (0.90, 0.99)	0.03
Hb (g/dL)	0.74 (0.57, 0.96)	0.03	0.74 (0.58, 0.96)	0.02
<b>Use of CCB</b>				
No	1	0.09	1	<0.01
Yes	0.84 (0.53, 1.05)		0.63 (0.45, 0.89)	
(†) ACR (mg/mmol)	1.24 (0.96, 1.60)	0.10		
<b>Use of adjunctive antiproliferative agents</b>				
No	1	0.11		
Yes	0.85 (0.40, 1.10)			
<sup>‡</sup> Smoking status				
Never smoked	1	0.12	1	0.03
Ex-smoker / Current smoker	1.16 (0.93, 1.84)		1.46 (1.04, 2.05)	
LTI (kg/m <sup>2</sup> )	0.96 (0.91, 1.02)	0.20		
(***) Age (years)	1.20 (0.91, 1.59)	0.20		
(*) Time post transplantation (years)	1.20 (0.91, 1.60)	0.20		
<sup>‡</sup> Ethnicity				
Caucasian	1	0.21		
Non-Caucasian	0.56 (0.23, 1.40)			
<b>Use of prednisolone</b>				
No	1	0.29		
Yes	0.17 (0.01, 4.75)			
(†) hsCRP (mg/L)	0.83 (0.58, 1.19)	0.31		
<b>Gender</b>				
Female	1	0.33		
Male	0.68 (0.32, 1.47)			
<b>Use of AAB</b>				
No	1	0.41		
Yes	1.09 (0.82, 1.64)			
<b>Presence of diabetes</b>				
Non-diabetic	1	0.42		
NODAT	2.02 (0.69, 5.96)			
Pre-DM	1.32 (0.37, 4.70)			
<b>Use of BAB</b>				
No	1	0.45		
Yes	0.98 (0.81, 1.28)			
<b>Use of calcineurin inhibitor</b>				
No	1	0.48		
Yes	1.44 (0.52, 4.01)			
(****) Fluid intake (mL)	1.07 (0.86, 1.33)	0.53		
Number of antihypertensive medications	0.95 (0.79, 1.16)	0.63		
Alb (g/L)	1.03 (0.91, 1.17)	0.67		
<b>Use of diuretic (furosemide)</b>				
No	1	0.81		
Yes	1.02 (0.67, 1.67)			
<b>Use of ACEI / ARB</b>				
No	1	0.90		
Yes	1.05 (0.48, 2.28)			
(*) FTI (kg/m <sup>2</sup> )	1.01 (0.88, 1.15)	0.95		
(****) Sodium intake (mg)	1.01 (0.84, 1.20)	0.95		
<b>Previous episodes of acute rejection</b>				
No	1	0.98		
Yes	1.01 (0.36, 2.89)			
<b>R<sup>2</sup> value from final model</b>		21%		

<sup>§</sup>Results in the final multivariate regression model were presented.

<sup>¶</sup>CI = Confidence Interval.

<sup>\*</sup>For the purpose of statistical analysis, smoking status was arranged into 2 categories, “non-smoker” versus “the combination of current smoker and ex-smoker”, 63% and 37% of patients respectively.

<sup>‡</sup>For the purpose of statistical analysis, the ethnicity of patients classified as “Afro-Caribbean”, “Asian” and “Others” was grouped as “Non-Caucasian”, 77% “Caucasian” versus 23% “Non-Caucasian”.

<sup>(\*)</sup> Coefficients reported for a 5-unit increase in explanatory variable.

<sup>(\*\*) Coefficients reported for a 10-unit increase in explanatory variable.</sup>

<sup>(\*\*\*) Coefficients reported for a 50-unit increase in explanatory variable.</sup>

<sup>(†)</sup> Variable analysed on the log scale (base 10).

Abbreviations: NT-proBNP=N-Terminal pro B-type Natriuretic Peptide; %VE=Percentage Volume Expansion; eGFR=estimated Glomerular Filtration Rate; Hb=Haemoglobin; CCB=Calcium Channel Blocker; ACR=Albumin : Creatinine Ratio; LTI= Lean Tissue Index; hsCRP=high-sensitivity C-Reactive Protein; AAB=Alpha-Adrenergic Blocker; NODAT>New Onset Diabetes After Transplantation; Pre-DM=Presence of Diabetes Mellitus pre-transplantation; BAB=Beta-Adrenergic Blocker; Alb=Albumin; ACEI=Angiotensin-Converting-Enzyme Inhibitor; ARB=Angiotensin-Receptor Blocker; FTI=Fat Tissue Index.