

Supplementary Table 3. Association of urine metabolites/creatinine (Cr) concentration with composite outcome, using backward stepwise multivariate Cox model

Ln (metabolites/Cr)	Unadjusted			Model 1 ^a			Model 2 ^b			Model 3 ^c		
	HR	95% CI	p-value	HR	95% CI	p-value	HR	95% CI	p-value	HR	95% CI	p-value
Glucose	1.32	1.22-1.44	<0.001	1.23	1.13-1.34	<0.001	1.31	1.18-1.45	<0.001	1.31	1.17-1.47	<0.001
Mannose	1.62	1.41-1.85	<0.001	1.41	1.21-1.63	<0.001	1.42	1.21-1.68	<0.001	1.43	1.19-1.72	<0.001
Xylose	0.59	0.45-0.78	<0.001									
Myo-inositol	2.01	1.67-2.42	<0.001	1.43	1.15-1.78	0.001	1.47	1.16-1.87	0.001	1.46	1.13-1.89	0.004
Glycerol	1.46	1.19-1.78	<0.001	1.43	1.16-1.77	0.001	1.40	1.11-1.75	0.004	1.57	1.21-2.03	0.001
Lactate	1.42	1.23-1.64	<0.001	1.43	1.20-1.71	<0.001	1.36	1.13-1.63	0.001	1.31	1.08-1.58	0.005
Pyruvate	1.07	0.90-1.26	0.45	1.35	1.13-1.63	0.001	1.31	1.07-1.60	0.01	1.20	0.97-1.48	0.099
Citrate	0.73	0.64-0.83	<0.001									
Oxoglutarate	1.02	0.86-1.22	0.80	1.34	1.10-1.64	0.003	1.47	1.19-1.81	<0.001	1.31	1.05-1.63	0.02
Succinate	1.11	0.94-1.32	0.22				1.24	1.03-1.50	0.02			
Fumarate	1.40	1.19-1.64	<0.001	1.43	1.18-1.74	<0.001	1.42	1.16-1.75	0.001	1.38	1.12-1.70	0.003
Pyroglutamate	3.68	2.43-5.55	<0.001	2.65	1.71-4.11	<0.001	3.14	1.97-4.99	<0.001	2.76	1.63-4.67	<0.001
Acetone	1.19	1.00-1.42	0.05									
Acetylcarnitine	1.09	0.91-1.31	0.35	1.32	1.08-1.63	0.008	1.27	1.00-1.61	0.048	1.23	0.96-1.58	0.096
Isoleucine	1.76	1.47-2.10	<0.001	1.56	1.31-1.85	<0.001	1.51	1.25-1.82	<0.001	1.43	1.16-1.76	0.001
Leucine	2.06	1.67-2.54	<0.001	1.69	1.38-2.06	<0.001	1.62	1.30-2.03	<0.001	1.53	1.20-1.95	0.001
Valine	1.72	1.44-2.07	<0.001	1.51	1.27-1.79	<0.001	1.60	1.36-1.89	<0.001	1.40	1.14-1.71	0.001
Creatine	0.73	0.59-0.91	0.004									
Taurine	0.85	0.71-1.02	0.07									
Threonine	1.40	1.19-1.64	<0.001	1.31	1.12-1.53	0.001	1.30	1.08-1.56	0.006	1.29	1.07-1.55	0.008
Carnitine	1.03	0.89-1.20	0.69	1.16	0.98-1.38	0.09						
Oxoisocaproate	1.68	1.24-2.27	0.001	2.49	1.77-3.49	<0.001	2.22	1.54-3.21	<0.001	1.79	1.22-2.61	0.003
Choline	1.72	1.50-1.96	<0.001	1.63	1.30-2.04	<0.001	1.25	1.05-1.50	0.01	1.24	1.03-1.49	0.02
DMG	0.70	0.54-0.91	0.007									
TMNO	1.33	1.14-1.57	<0.001	1.26	1.07-1.48	0.006	1.36	1.13-1.63	0.001	1.20	0.99-1.45	0.06
Betaine	1.06	0.86-1.32	0.58									

CI, confidence interval; DMG, N,N-dimethylglycine; HR, hazard ratio; TMNO, trimethylamine N-oxide.
^aAdjusted for age, sex, hypertension, and estimated glomerular filtration rate. ^bAdjusted for model 1 variables, plus hemoglobin, albumin, aspartate transaminase, alanine transaminase, cholesterol, and uric acid. ^cAdjusted for model 2 variables, plus spot urine protein-creatinine ratio and hemoglobin A1c.