

SUPPLEMENTAL MATERIAL

Table S1. Search strategy for MEDLINE.

<p>“Skin Autofluorescence”</p> <p>OR</p> <p>Fluorescence</p> <p>OR</p> <p>Autofluorescence</p> <p>OR</p> <p>SAF</p>	<p>AND</p>	<p>"Tissue advanced glycation end products"</p> <p>OR</p> <p>"Advanced Glycosylation End Products"</p> <p>OR</p> <p>"Advanced Glycation End Products"</p>	<p>AND</p>	<p>Cardiovascular</p> <p>OR</p> <p>Mortality</p> <p>OR</p> <p>"all-cause mortality"</p> <p>OR</p> <p>"cardiovascular mortality"</p> <p>OR</p> <p>"cause-specific mortality"</p> <p>OR</p> <p>Death</p> <p>OR</p> <p>"cardiovascular death"</p> <p>OR</p> <p>"overall mortality"</p>
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Table S2. Covariates used for adjusting the data reported by the included studies.

Reference	Covariates
Arsov et al 2013 ¹	Age, sex, pre-CVD, diabetes mellitus, hypertension, HbSAg, dialysis duration, hs-CRP, ICAM-1, SOD, MPO, albumin.
de Vos et al 2014 ²	Age, sex, current smoking, weight status, diabetes mellitus, hypertension, lipid-lowering drugs, eGFR, pre-CVD.
Fraser et al 2014 ³	Age, sex, pre-CVD, diabetes mellitus, hypertension, current smoking, BMI, central obesity, total-to-HDL cholesterol ratio, eGFR, uACR, hemoglobin.
Gerrits et al 2012 ⁴	Age, albumin, diabetes mellitus, pre-CVD, renal replacement therapy, pulse pressure, hematocrit, serum phosphorus, PTH.
Kimura et al 2014 ⁵	Age, sex, dialysis duration, diabetes mellitus, carotid IMT, albumin, pentosidine, hs-CRP, pre-CVD.
Lutgers et al 2008 ⁶	Sex, pre-CVD.
Meerwaldt et al 2005 ⁷	Age, albumin, hs-CRP, diabetes mellitus, dialysis duration, dialysis duration, hemodialysis treatment, triglycerides, LDL, smoking, PTH.
Meerwaldt et al 2007 ⁸	Age, HbA1c, hypertension, hemodialysis treatment, triglycerides, pre-CVD, LDL.
Nongnuch et al 2015 ⁹	Sex, Davies' score, dialysis duration, albumin, cholesterol, phosphate binder, ethnicity, pre-CVD, diabetes mellitus, mode of haemodialysis, Kt/v, dialysis duration, hs-CRP, urine output, β 2 microglobulin.
Siripol et al 2015 ¹⁰	None.

Pre-CVD: preexisting cardiovascular diseases; HbSAg: hepatitis B surface antigen; hs-CRP: high-sensitivity C-reactive protein; ICAM-1: Intercellular Adhesion Molecule 1; SOD: superoxide dismutase; MPO: Myeloperoxidase; eGFR: estimated glomerular filtration rate; HDL: high density lipoprotein; uACR: albumin-to-creatinine ratio; PTH: parathyroid hormone; IMT: intima-media thickness; LDL: low density lipoprotein; HbA1c: glycated haemoglobin.

Table S3. Study quality assessed by QUIPS tool.

Reference	Study Participation	Study Attrition	Prognostic Factor (PF) Measurement	Outcome Measurement	Study Confounding	Statistical Analysis and Reporting	Total
Arsov et al 2013 ¹	●	●	●	●	●	●	●
de Vos et al 2014 ²	●	●	●	●	●	●	●
Fraser et al 2014 ³	●	●	●	●	●	●	●
Gerrits et al 2012 ⁴	●	●	●	●	●	●	●
Kimura et al 2014 ⁵	●	●	●	●	●	●	●
Lutgers et al 2008 ⁶	●	●	●	●	●	●	●
Meerwaldt et al 2005 ⁷	●	●	●	●	●	●	●
Meerwaldt et al 2007 ⁸	●	●	●	●	●	●	●
Nongnuch et al 2015 ⁹	●	●	●	●	●	●	●
Siripol et al 2015 ¹⁰	●	●	●	●	●	●	●

● : Low risk of bias ● : Moderate risk of bias ● : High risk of bias

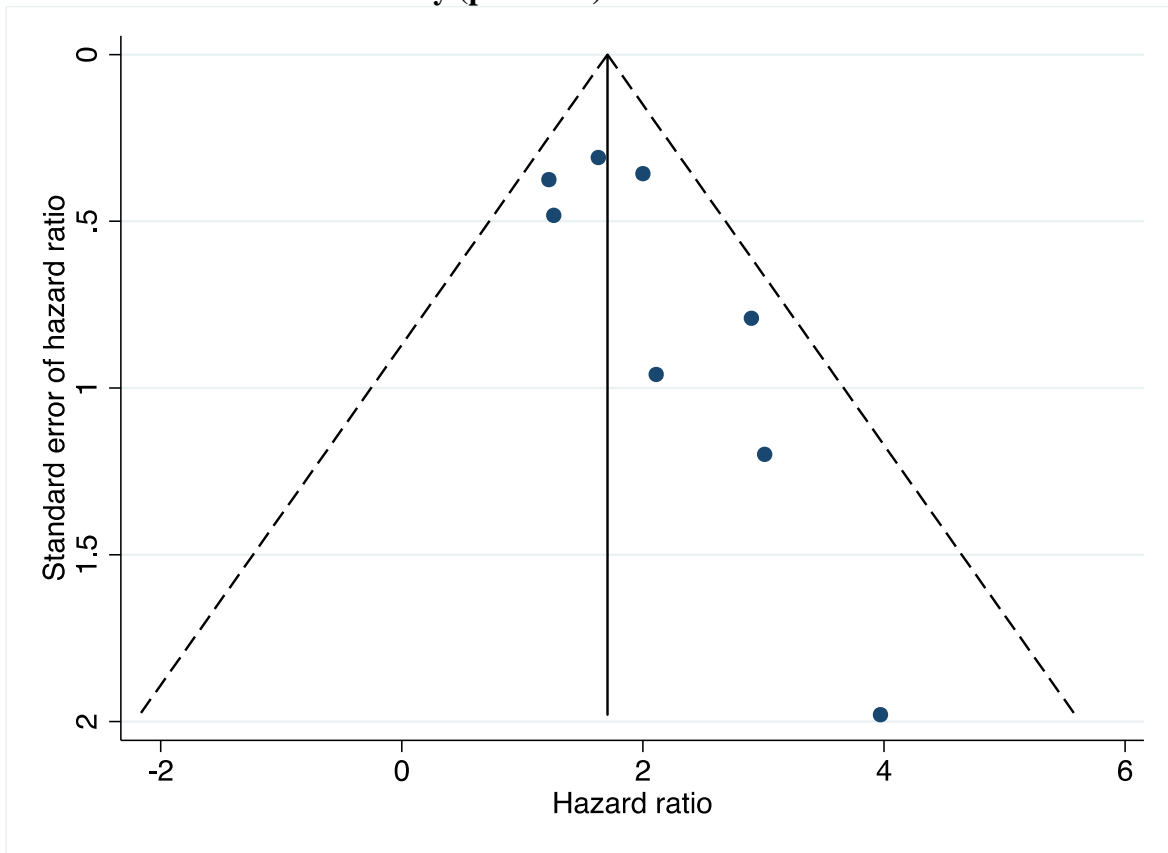
Table S4. Random effect metaregression model.

Covariate	Cardiovascular mortality				All-cause mortality			
	Number of studies	β (SE)	p	I ²	Number of studies	β (SE)	p	I ²
Length of follow up (years)	8	0.18 (0.17)	0.340	14.0	7	-0.01 (0.32)	0.985	49.4
Male sex (%)	8	0.00 (0.02)	0.998	27.0	7	0.03 (0.01)	0.068	1.4
Age (years)	8	-0.01 (0.02)	0.679	23.4	7	-0.02 (0.05)	0.730	52.4
Diabetes mellitus (%)	8	0.01 (0.01)	0.136	0.0	7	0.01 (0.01)	0.284	36.4
BMI (kg/cm ²)	7	-0.10 (0.10)	0.383	3.0	5	-0.14 (0.12)	0.307	21.8
Current smoker (%)	7	-0.00 (0.01)	0.813	27.4	6	0.04 (0.03)	0.273	38.5
Hypertension (%)	6	-0.01 (0.01)	0.160	0.0	5	-0.02 (0.01)	0.104	0.0
Pre-CVD (%)	6	-0.02 (0.03)	0.553	6.0	6	0.01 (0.03)	0.699	38.8
Baseline SAFs (AU)	8	-0.20 (0.38)	0.619	22.8	7	-0.47 (0.77)	0.567	48.3
hs-CRP (mg/L)	3	0.04 (0.25)	0.885	61.8	4	0.14 (0.09)	0.270	26.7
SBP (mmHg)	3	-0.07 (0.08)	0.544	0.0	3	0.06 (0.03)	0.335	0.0
DBP (mmHg)	3	0.02 (0.04)	0.676	0.0	3	0.01 (0.06)	0.827	69.2
Haemoglobin (g/dL)	4	0.02 (0.42)	0.960	20.9	4	-0.10 (0.36)	0.805	58.7
HbA1c (%)	3	0.50 (0.39)	0.419	0.0	N/O	-	-	-
Albumin (g/L)	3	-0.08 (0.17)	0.720	42.6	4	-0.10 (0.08)	0.322	16.8
Creatinine (mg/dL)	4	-0.08 (0.09)	0.454	31.1	3	0.02 (0.15)	0.899	41.4
Total cholesterol (mg/dL)	5	0.01 (0.01)	0.532	44.2	5	0.00 (0.02)	0.875	59.5
LDL cholesterol (mg/dL)	3	-0.04 (0.05)	0.537	7.0	N/O	-	-	-
Triglycerides (mg/dL)	4	-0.02 (0.04)	0.640	59.7	3	0.03 (0.13)	0.285	0.0

SE: standard error; BMI: body mass index; Pre-CVD: preexisting cardiovascular disease; AGES: advanced glycation end products; AU: arbitrary units; hs-CRP: high-sensitivity C-reactive protein; SBP: systolic blood pressure; DBP: diastolic blood pressure; HbA1c: glycated haemoglobin A1c; LDL: low density lipoprotein; N/O: not enough observations.

Figure S1. Assessment of potential publication bias by Egger test.

A Cardiovascular mortality (p = 0.072)



B All-cause mortality (p = 0.007)

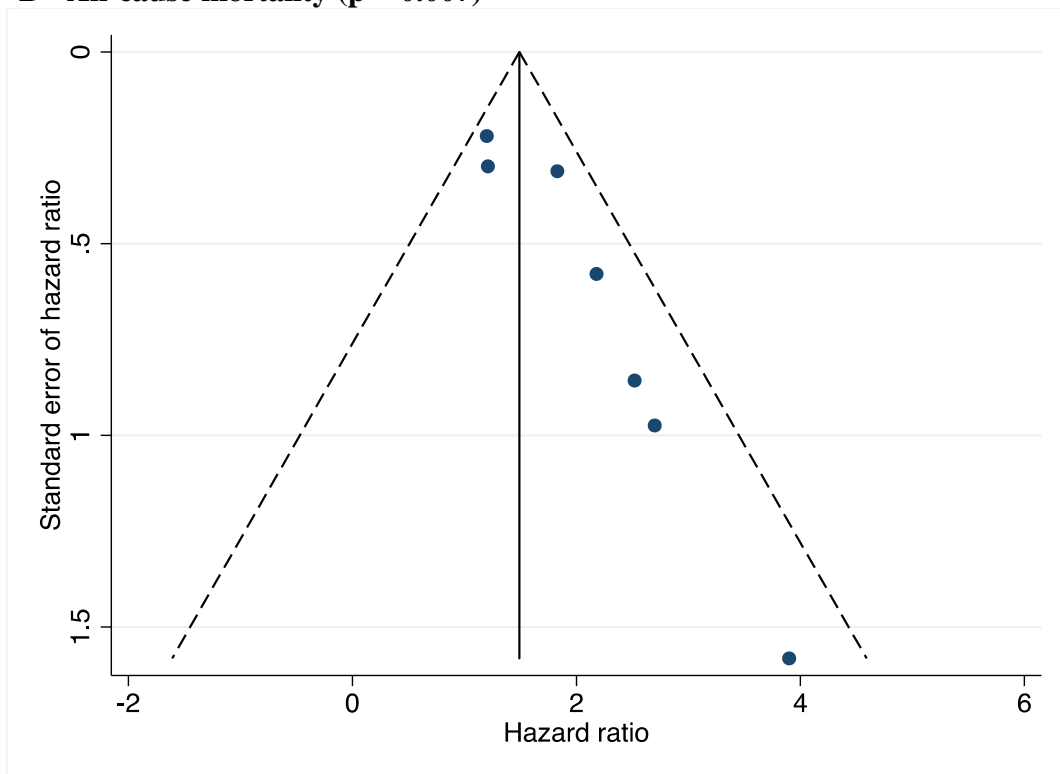
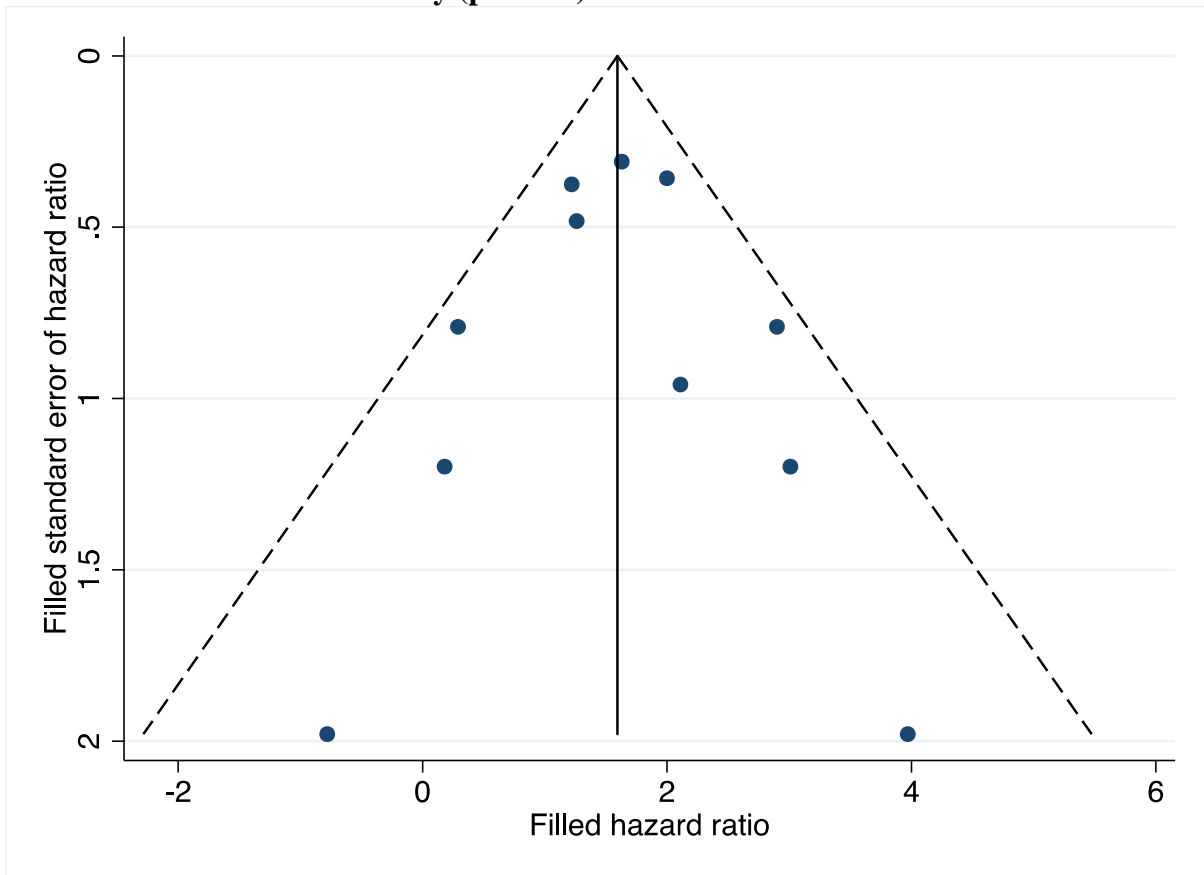
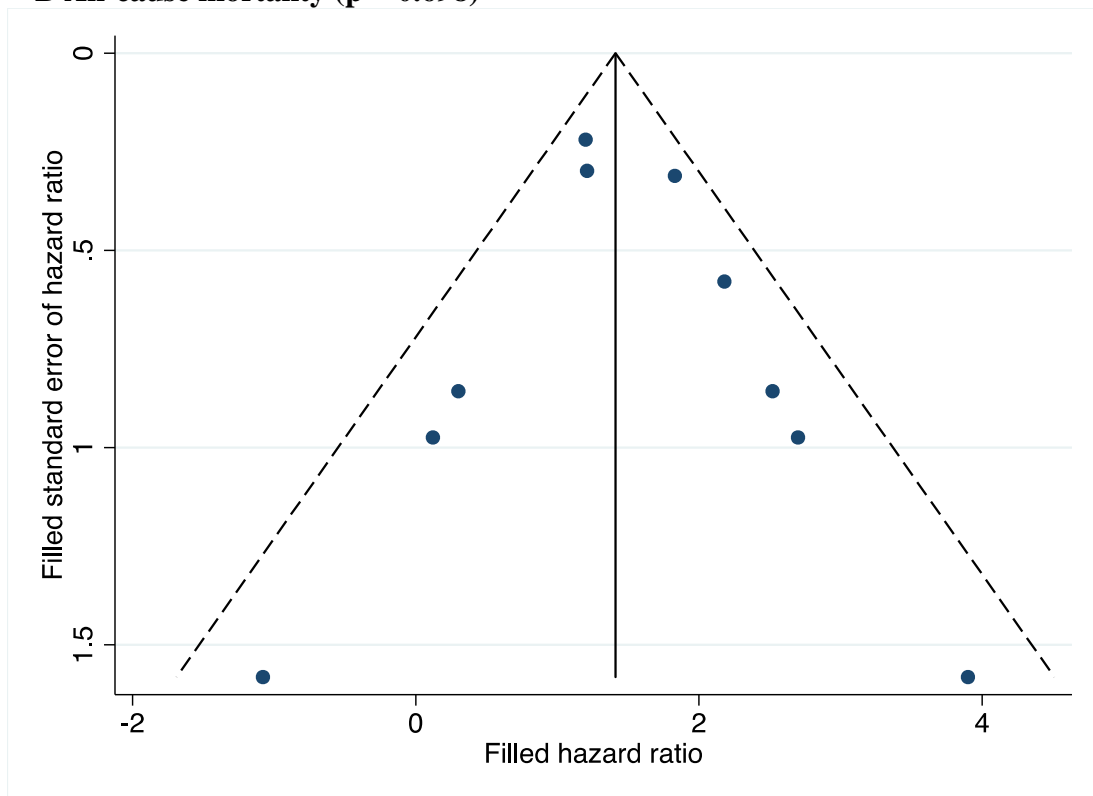


Figure S2. Assessment of potential publication bias by Egger test post Trim and fill.

A Cardiovascular mortality (p = 0.96)



B All-cause mortality (p = 0.698)



Supplemental References:

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5. Kimura H, Tanaka K, Kanno M, Watanabe K, Hayashi Y, Asahi K, Suzuki H, Sato K, Sakaue M, Terawaki H, Nakayama M, Miyata T, Watanabe T. Skin autofluorescence predicts cardiovascular mortality in patients on chronic hemodialysis. *Ther Apher Dial*. 2014;18:461-467.
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7. Meerwaldt R, Hartog JW, Graaff R, Huisman RJ, Links TP, den Hollander NC, Thorpe SR, Baynes JW, Navis G, Gans RO, Smit AJ. Skin autofluorescence, a measure of cumulative metabolic stress and advanced glycation end products, predicts mortality in hemodialysis patients. *J Am Soc of Nephrol*. 2005;16:3687-3693.
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9. Nongnuch A, Davenport A. Skin autofluorescence advanced glycosylation end products as an independent predictor of mortality in high flux haemodialysis and haemodialysis patients. *Nephrology*. 2015;20:862-867.
10. Siriopol D, Hogas S, Veisa G, Mititiuc I, Volovat C, Apetrii M, Onofriescu M, Busila I, Oleniuc M, Covic A. Tissue advanced glycation end products (AGEs), measured by skin autofluorescence, predict mortality in peritoneal dialysis. *Int Urol Nephrol*. 2015;47:563-569.