Supplementary Materials

Disease-specific signatures of circulating extracellular vesicles detected by the surface plasmon resonance imaging: a pilot study

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Supplementary Table 1. Post hoc power analysis

EV markers	T2DM			HT	
	Effect size	Power	n needed for 80% power	Effect size	Power
CD20	5.44	1.00	-	5.76	1.00
DARC	3.85	1.00	-	0.83	0.84
CD81	2.02	1.00	-	2.06	1.00
AcvRIIa	4.43	1.00	-	5.61	1.00
CD9	5.93	1.00	-	1.72	1.00
EpoR	0.60	0.62	-	3.60	1.00
CD110	4.16	1.00	-	0.80	0.81
CD71	2.07	1.00	-	2.87	1.00
TfR2	2.59	1.00	-	3.75	1.00
CD44	1.03	0.97	-	0.71	0.71
MBM	0.95	0.94	-	2.75	1.00
CD4	0.16	0.09*	635	0.81	0.82
CD8	0.19	0.11*	420	0.94	0.91
CD25	0.27	0.17*	217	0.70	0.70
CD169	0.07	0.06*	3102	0.78	0.79

*If power is less than 0.6, the required sample size is calculated. T2DM: Type II diabetes mellitus; HT: hypertension; DARC: Duffy antigen receptor for chemokine; AcvRIIa: activin receptor type-2A; EpoR: erythropoietin receptor; TfR2: transferrin receptor 2; MBM: MAM lectin binding molecules.

Supplementary Table 2. Correlation analysis between EV markers and each biochemical test data

	T2DM												HT	
	Retinopathy						Nephropathy						Moderate / High risk Group (n = 22)	Low risk Group (n = 25)
	Yes (n = 21)			No (n = 50)			Yes (n = 20)			No (n = 51)				
markers	eGFR	sCre	U-Alb	eGFR	sCre	U-Alb	eGFR	sCre	U-Alb	eGFR	sCre	U-Alb	Noradrenaline	Noradrenaline
CD20	***-0.673***	0.285	0.121	0.022	0.147	0.136	0.078	0.223	0.083	-0.030	0.025	-0.033	0.374	-0.303
DARC	-0.144	-0.008	-0.072	-0.128	0.389	0.194	-0.105	0.345	0.209	-0.121	0.062	-0.071	0.226	0.003
CD81	-0.310	0.073	-0.046	0.037	0.205	0.193	0.070	0.201	0.099	0.030	-0.079	0.100	-0.173	-0.304

AcvRIIa	0.172	-0.046	-0.081	-0.038	0.209	0.055	0.067	0.126	-0.073	0.036	0.013	-0.056	***-0.682***	-0.149
CD9	0.200	-0.097	-0.162	-0.206	0.397	0.167	-0.014	0.173	-0.013	-0.088	0.150	-0.012	-0.084	-0.269
EpoR	0.085	0.072	-0.037	-0.106	-0.060	-0.271	0.104	-0.003	-0.342	-0.263	0.328	0.002	0.056	-0.225
CD110	0.077	-0.223	-0.153	-0.109	0.170	0.040	-0.097	0.014	-0.049	-0.045	-0.016	0.159	0.083	-0.126
CD71	-0.103	0.043	0.213	-0.029	0.062	0.009	-0.176	0.010	0.030	0.146	0.001	0.056	0.102	0.042
TfR2	0.213	-0.003	-0.154	-0.202	-0.017	-0.148	-0.039	-0.038	-0.255	-0.118	0.239	-0.134	0.018	0.062

CD44	*0.647*	-0.133	-0.131	-0.081	-0.126	-0.175	0.049	-0.243	-0.279	-0.012	0.154	-0.051	0.050	-0.152
MBM	-0.078	-0.247	-0.109	0.082	0.151	0.293	0.167	-0.086	0.184	0.030	-0.177	0.007	*0.755*	-0.126

The values in the table indicate correlation coefficients (r). Bold and italicized numbers are those with higher correlation coefficients than others.

T2DM: Type II diabetes mellitus; HT: hypertension; eGFR: estimated Glomerular Filtration Rate; sCre: serum Creatinine; U-Alb: Urine-Albumin; DARC: Duffy antigen receptor for chemokine; AcvRIIa: activin receptor type-2A; EpoR: erythropoietin receptor; TfR2: transferrin receptor 2; MBM: MAM lectin binding molecules.

Supplementary Table 3. Logistic regression analysis results on laboratory data and SPRi intensities in T2DM and HT patients

Variables	T2DM				HT	
	Retinopathy (n = 21)		Nephropathy (n = 20)		Moderate/High risk Group (n = 22)	
	OR (95% CI)	*P*	OR (95% CI)	*P*	OR (95% CI)	*P*
Ages	0.996 (0.94 - 1.05)	0.873	1.022 (0.93 - 1.12)	0.637	1.010 (0.95 - 1.08)	0.763
Gender	0.516 (0.16 - 1.71)	0.279	1.656 (0.38 - 2.10)	0.101	2.179 (0.33 - 1.44)	0.419
eGFR	0.991 (0.97 - 1.02)	0.461	1.133 (1.03 - 1.32)	0.088		
sCre	1.263 (0.66 - 2.41)	0.479	0.946 (0.47 - 1.63)	0.097		
U-Alb	1.001 (0.99 – 1.01)	0.398	1.074 (1.02 - 1.13)	*0.005**		
CD20	0.315 (0.09 - 1.09)	**0.067**	1.169 (0.41 - 2.59)	0.237		
CD44	0.002 (0.00 – 1.08)	**0.053**	0.809 (0.25 - 0.87)	0.414		
BNP					0.997 (0.95 - 1.05)	0.965
Nad					1.023 (1.01 - 1.04)	*0.003**
AcvRIIa					0.070 (0.00 - 0.24)	**0.063**
MBM					0.036 (0.00 - 0.91)	*0.022**

*P < 0.05. Bold numbers without asterisks are low P-values that did not achieve the 0.05 criterion. T2DM: Type II diabetes mellitus; HT: hypertension; OR: odds ratio; CI: confidence interval; eGFR: estimated Glomerular Filtration Rate; sCre: serum Creatinine; U-Alb: Urine-Albumin; BNP: brain natriuretic peptide; Nad: noradrenaline; AcvRIIa: activin receptor type-2A; MBM: MAM lectin binding molecules.