

## **SUPPLEMENTARY ITEMS**

### **SUPPLEMENTARY METHODS**

#### **SDS transformation of blood pressure and BMI**

In all children height, body mass index and blood pressure are dynamic parameters and change physiologically with age. Therefore, unlike as in adults, absolute parameters cannot be compared directly between children of different ages and sexes. To correct for these physiological differences, we calculated Standard Deviation Scores (SDS; also known as z-scores) as follows:

$$(y-m)/SD$$

where  $y$  is the value for an individual patient,  $m$  is the mean of the control population and  $SD$  is the standard deviation of the control population.

#### **Supplementary Table S1: Specification of ELISA-Test kits applied**

The assays were performed according the suppliers instructions with the following modifications: all assays from Cloud-Clone and CUSBIO were performed with double incubation time to increase sensitivity. Samples were pre-incubated with 0.5% Tween 20 before measured of gelsolin to reach dilutional linearity. For the quantification of PICP, TGF- $\beta$ 1, and CRP in urine either incubation times were prolonged or concentrated specimens were applied. For that samples have been concentrated in Amicon® Ultra -15 Centrifugal filters (3K, UFC900324) by ~10 to ~60 fold depending on the starting volume available.

### **SUPPLEMENTARY RESULTS**

#### **Supplementary Figure S1: Comparison of the concentrations of BM candidates in serum and urine from patients and controls**

Entire results are given here.

Significance values are given as bars:  $p < 0.05$  (bright blue);  $p < 0.01$  (dark blue); all other not significant.

First series: biomarker concentrations in serum (S)

Second series: biomarker concentrations in urine (U)

Abbreviations of biomarker proteins: cf. main text

## **Supplementary Table S2: Correlation of each BM in urine with each other's**

Analyses were performed by SPSS (v.27). Lower left halve: correlation according Pearson; upper right halve: correlation according Spearman. Each cell shows the correlation coefficient (upper figure) and a p-value (lower figure).

\* and \*\* indicate significant and highly significant correlations proposed by SPSS. Notwithstanding that, we set a correlation coefficient >0.500 moderately significant and >0.600 highly significant and mark these values by blue (Pearson) and green (Spearman) filling.

**ROC analysis, comparison of BM values from patient's groups with healthy controls (Tables S3 to S8)**

**Table S3: Patients with obesity, hypertension, metabolic syndrome, and T2DM (group A)**

**Table S4: Patients with T1DM (group B)**

**Table S5: Patients with renal agenesis, hypoplasia, multicystic renal dysplasia (group C)**

**Table S6: Patients with anomalies of the urinary tract, duplex kidneys (group D)**

**Table S7: Patients with post-infectious GN, IgAN, IgAV (group G)**

**Table S8: Entire nephropathy patients (group A to G)**

## **Correlation analyses of BMs with individual parameters**

### **Sub-group of healthy controls (Table S9 to S11)**

#### **Table S9: Correlation of serum and urinary BM candidates with BMI z-score**

#### **Table S10: Correlation of serum and urinary BM candidates with age**

Graphical visualization of correlations considered significant

Serum angiotensinogen and complement component C1q with age

#### **Table S11: Correlation of serum and urinary BM candidates with blood pressure (BP z-score)**

Graphical visualization of the correlation considered significant

Serum adiponectin with diastolic blood pressure

### **Patients with obesity, hypertension, metabolic syndrome, and T2DM (group A, Tables S12 to S15)**

#### **Table S12: Correlation of serum and urinary BM candidates with UACR and blood glucose**

Graphical visualization of correlations considered as significant:

Urinary angiotensinogen (AGT), gelsolin (GS), vitronectin (VTN), and complement component C9 (C9) with blood glucose concentration

#### **Table S13: Correlation of serum and urinary BM candidates with HbA1c and BMI z-score**

#### **Table S14: Correlation of serum and urinary BM candidates with serum and urinary CRP**

Graphical visualization of correlations considered as significant:

Urinary gelsolin (GS) with serum CRP, and urinary CRP with serum CRP



**Table S15: Correlation of serum and urinary BM candidates with blood pressure(BP z-score)**

Graphical visualization of correlations considered as significant:

Urinary adiponectin (UADP) and serum complement factor I (SCFI) with systolic blood pressure

Serum PICP, TGF $\beta$ , and urinary complement component 9 (UC9) with diastolic blood pressure

**Patients with T1DM (group B)**

**Table S16: Correlation of serum and urinary BM candidates with UACR and blood glucose**

Graphical visualization of correlations considered as significant:

Serum CRP, urinary (U) alpha1-acid glycoprotein (a1AGP), and PICP with UACR, as well as serum (S)

a1AGP and leucine rich glycoprotein 1 (LRGP1) with blood glucose

**Table S17: Correlation of serum and urinary BM candidates with HbA1c and BMI z-scores**

**Table S18: Correlation of serum and urinary BM candidates with blood pressure (BP z-score)**

**Table S19: Correlation of serum and urinary BM candidates with disease duration**

**Patients with nephropathies (groups A to G, Tables S20 to S23)**

**Table S20: Correlation of serum and urinary BM candidates with serum creatinine and UACR**

Graphical visualization of correlation considered as significant:

Urinary lumican (ULUM) with UACR

**Table S21: Correlation of serum and urinary BM candidates with eGFR and cGFR**

Graphical visualization of correlations considered as significant:  
Serum complement factor H with eGFR and cGFR

**Table S22: Correlation of serum and urinary BM candidates with serum CRP**

Graphical visualization of correlation considered as significant:  
Serum complement factor H with serum CRP

**Table S23: Correlation of serum and urinary BM candidates with blood pressure (BP z-score)**

**Analysis of sex differences of BM**

**Table S24: Significance (p-values) of sex differences of urinary BM in various groups**

**Table S25: Significance (p-values) of sex differences of serum BM in various groups**

BM that appear significantly different between males and females are indicated by bold letters and are shown graphically. Empty cells: not enough values for analysis.

**Supplementary Figure S1:**

**Comparison of the concentrations of BM candidates in serum and urine from patients and controls**

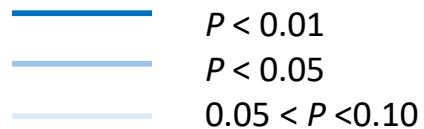
Entire results are given here (17 BM candidates each in serum and urine).

Significance values are given as bars.

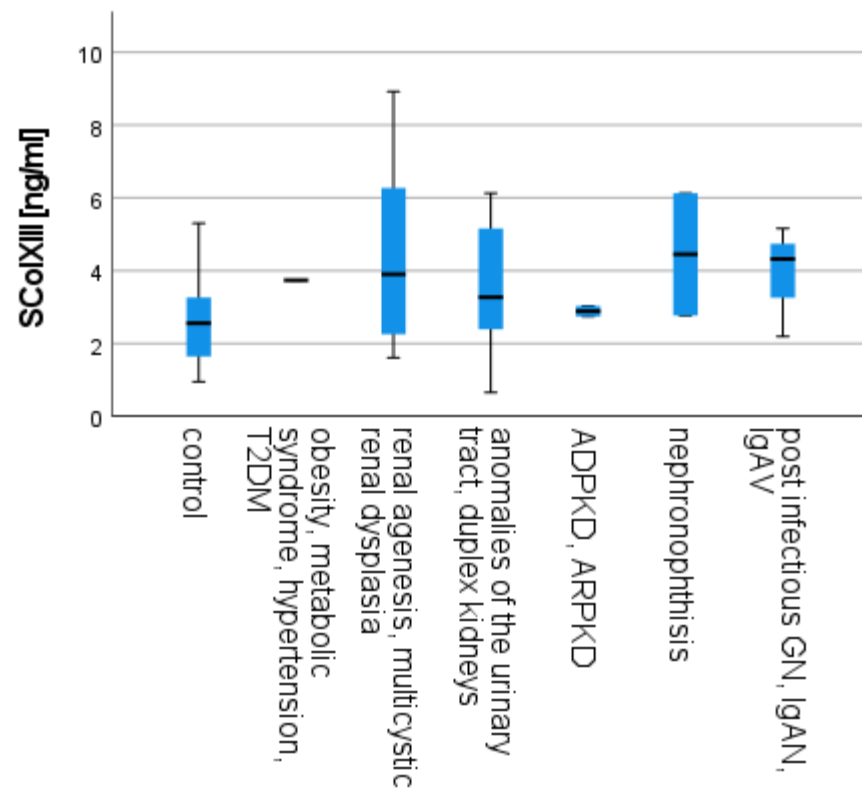
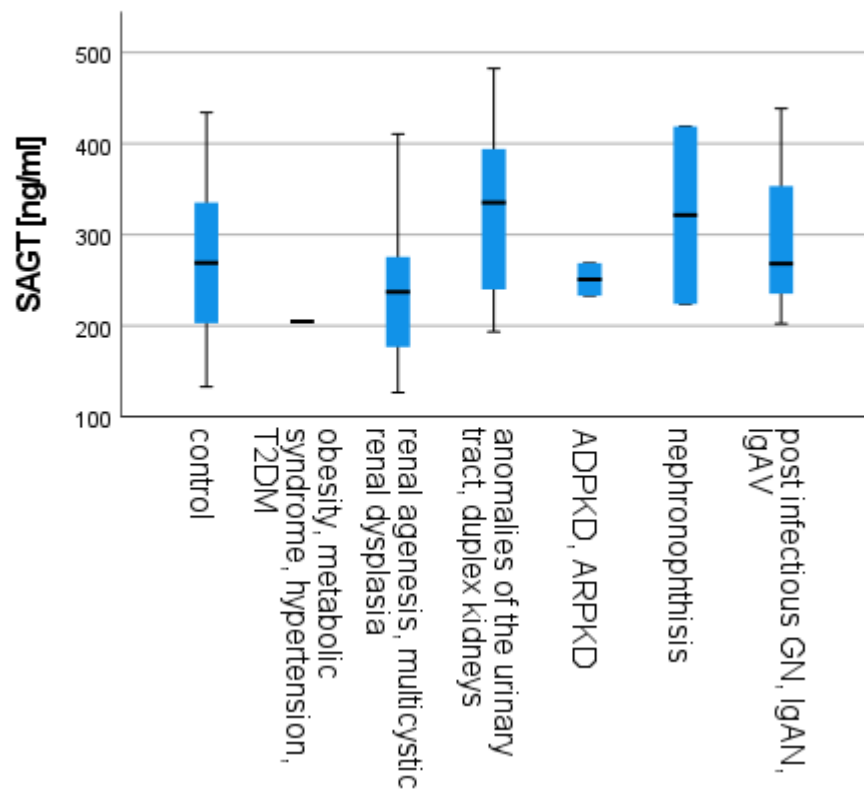
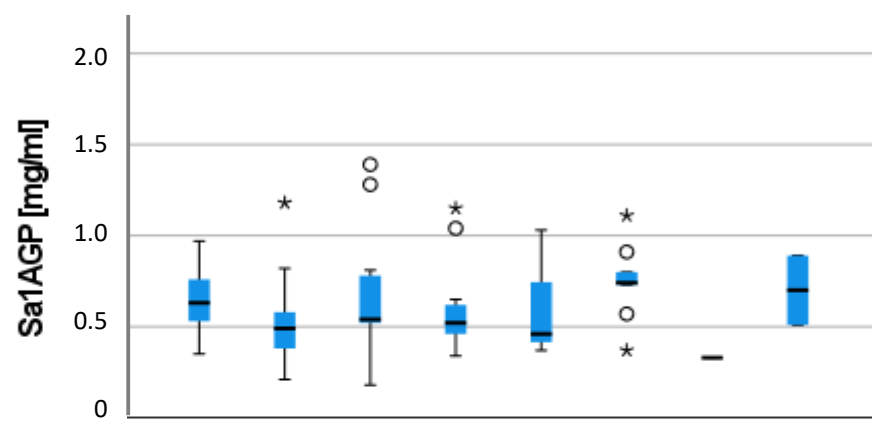
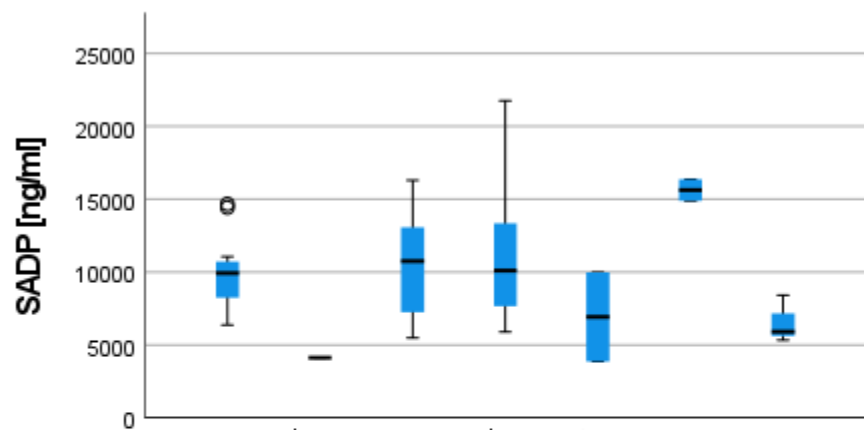
First series: biomarker concentrations in serum (S)

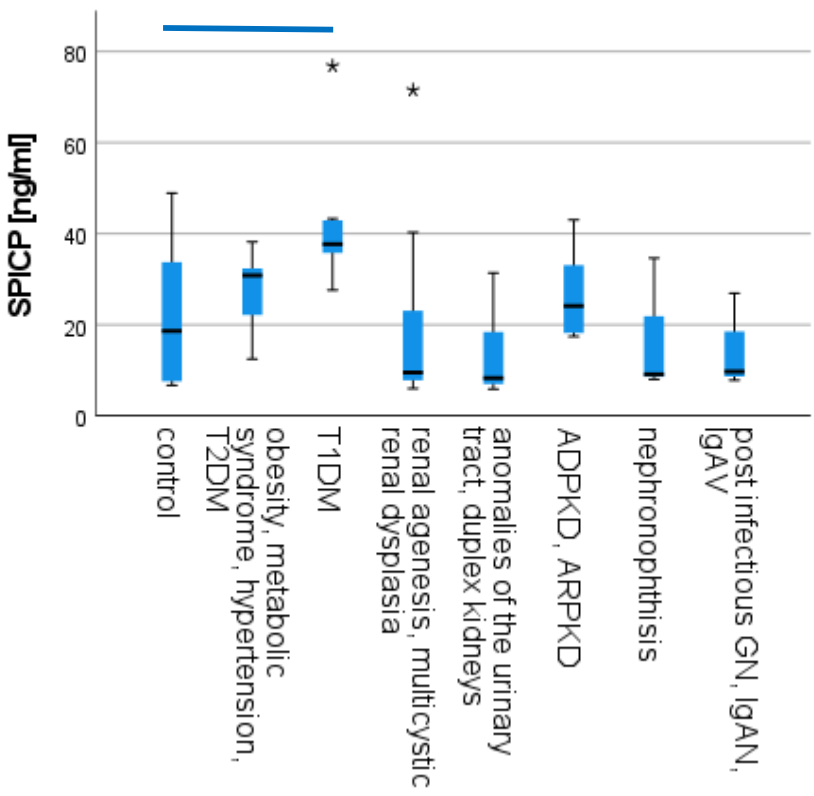
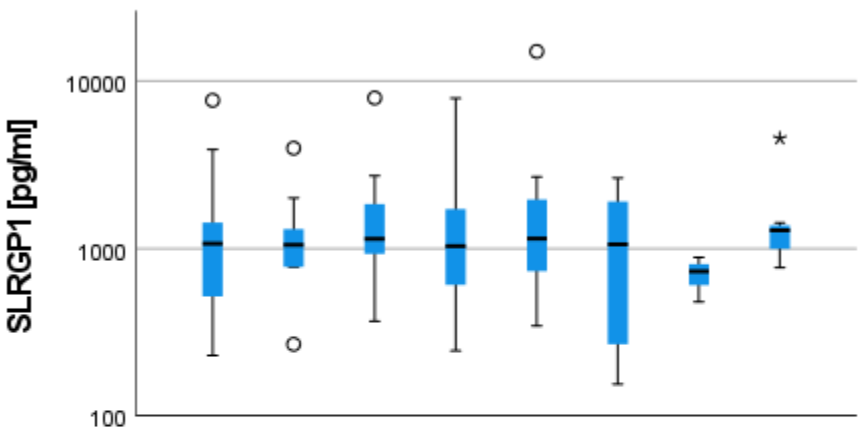
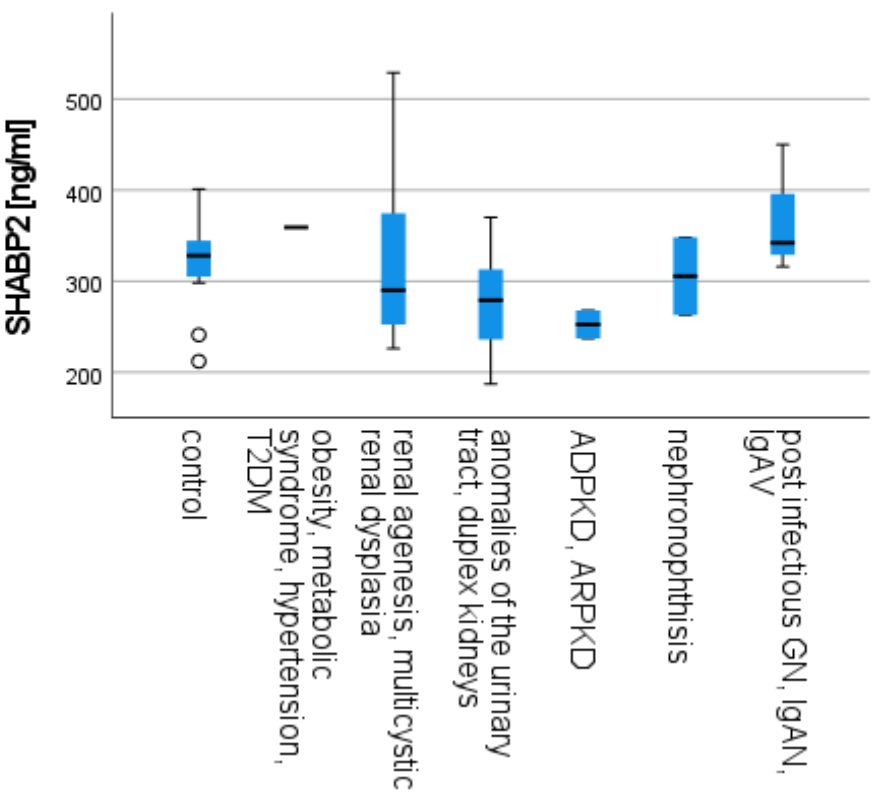
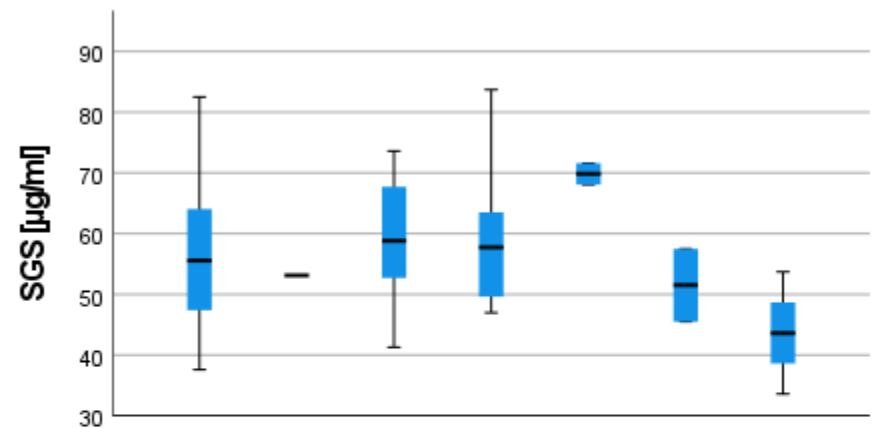
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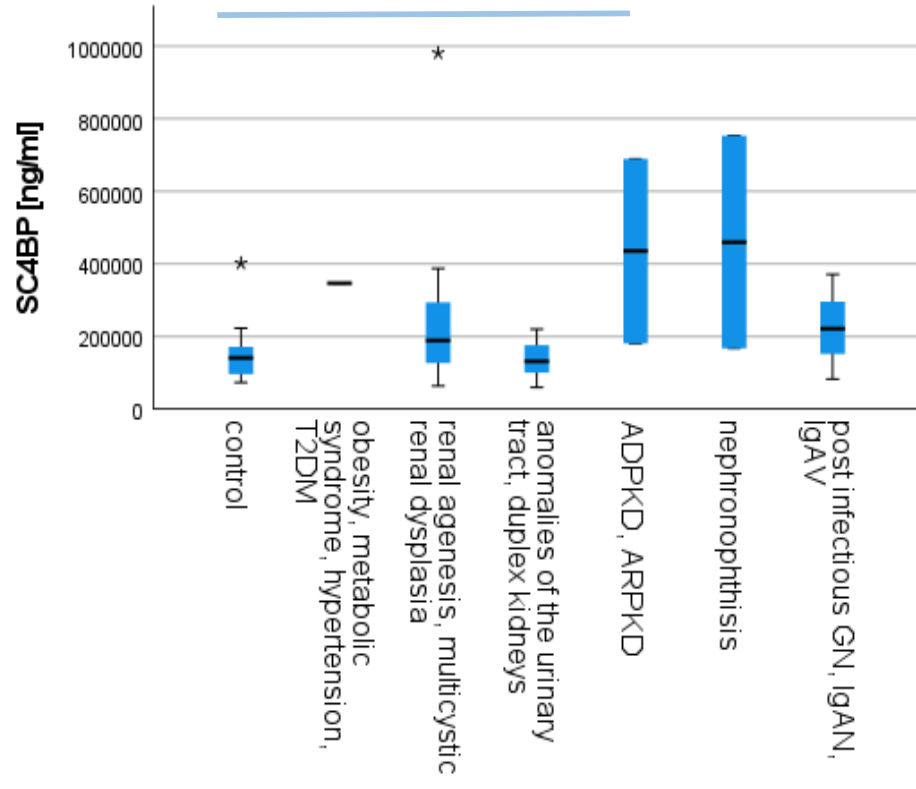
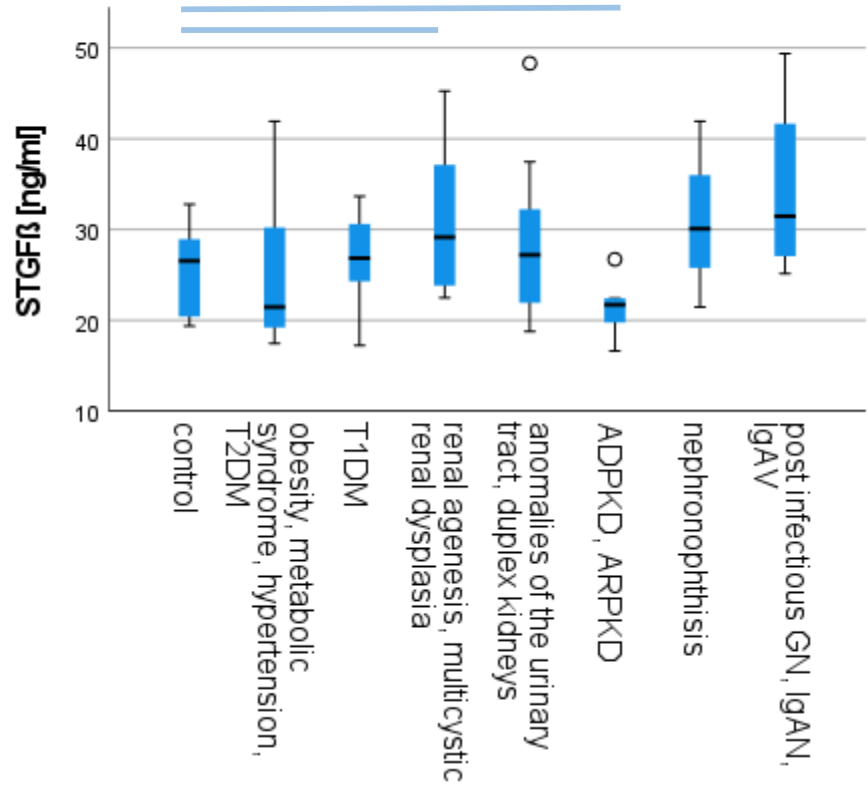
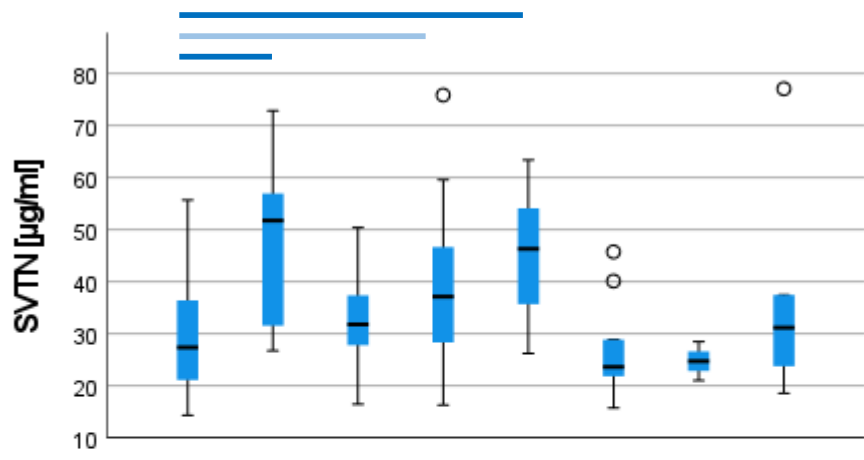
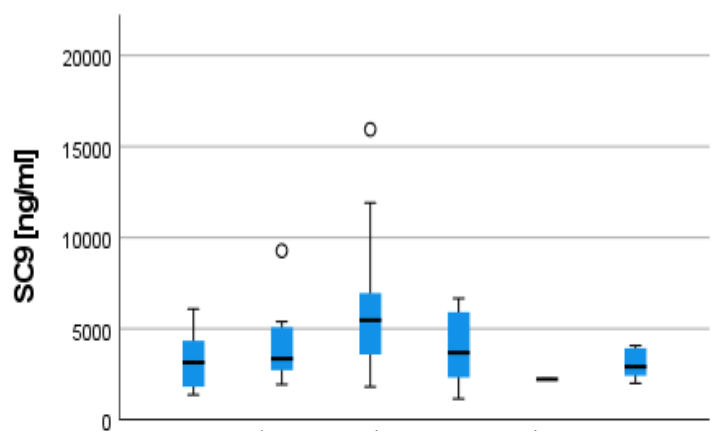
Abbreviations of biomarker proteins: cf. main text

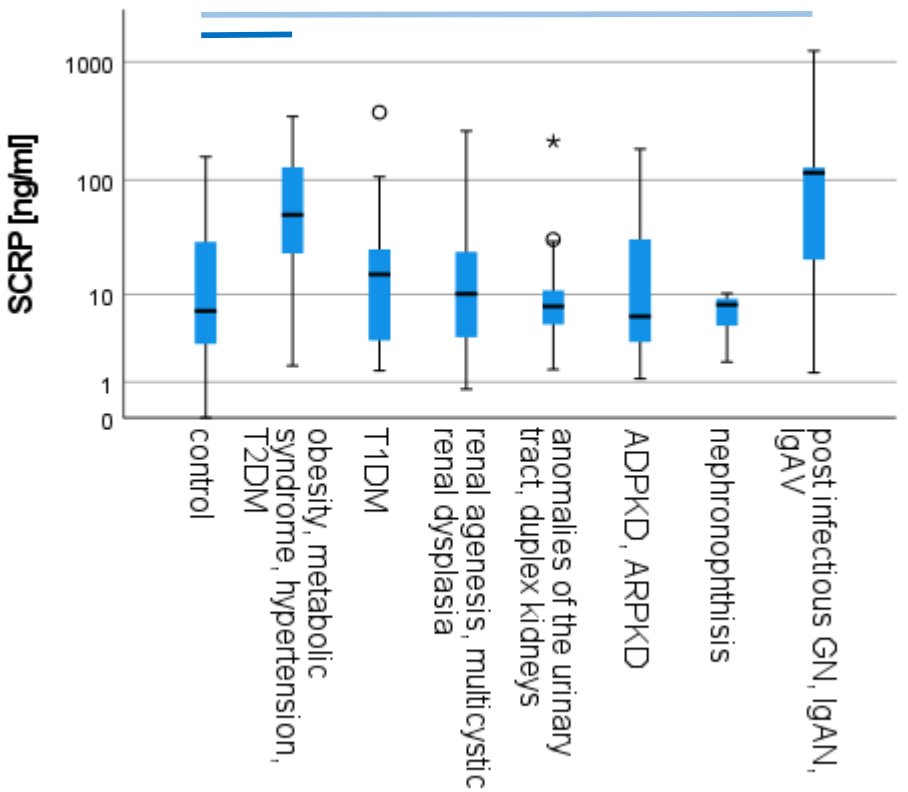
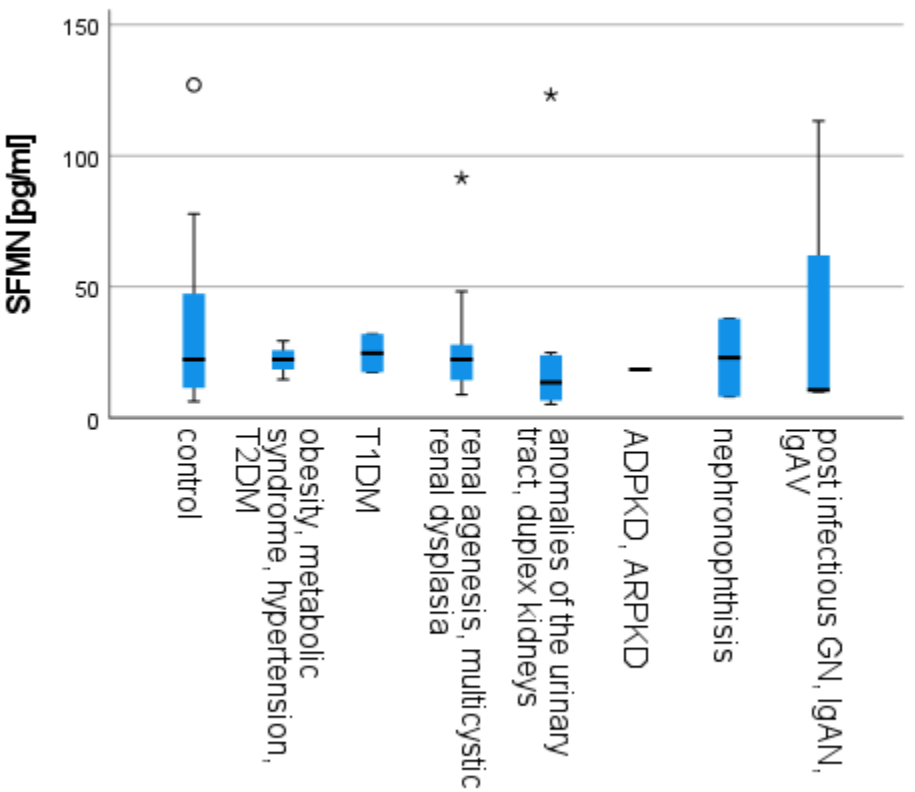


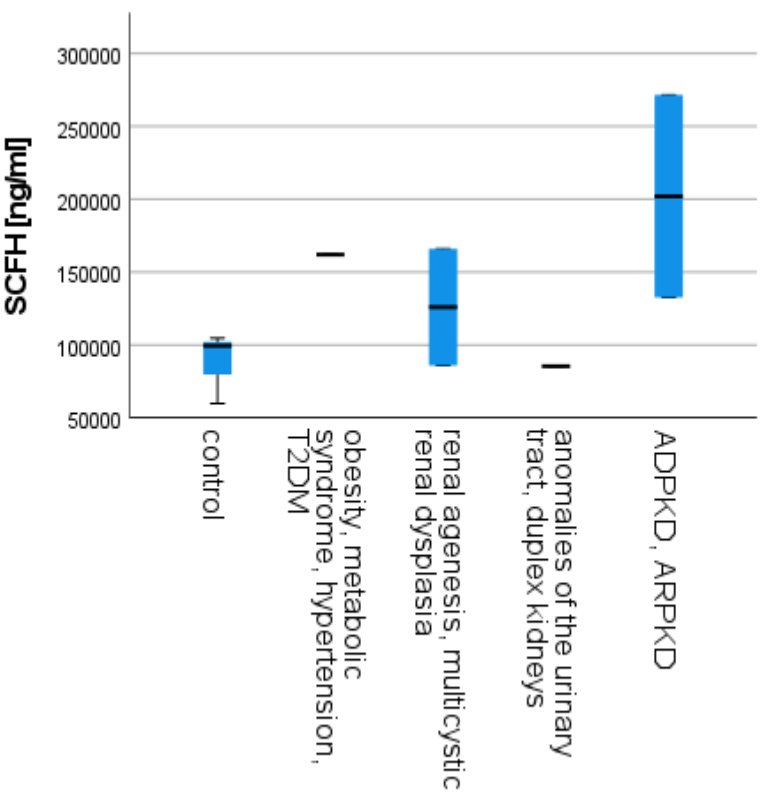
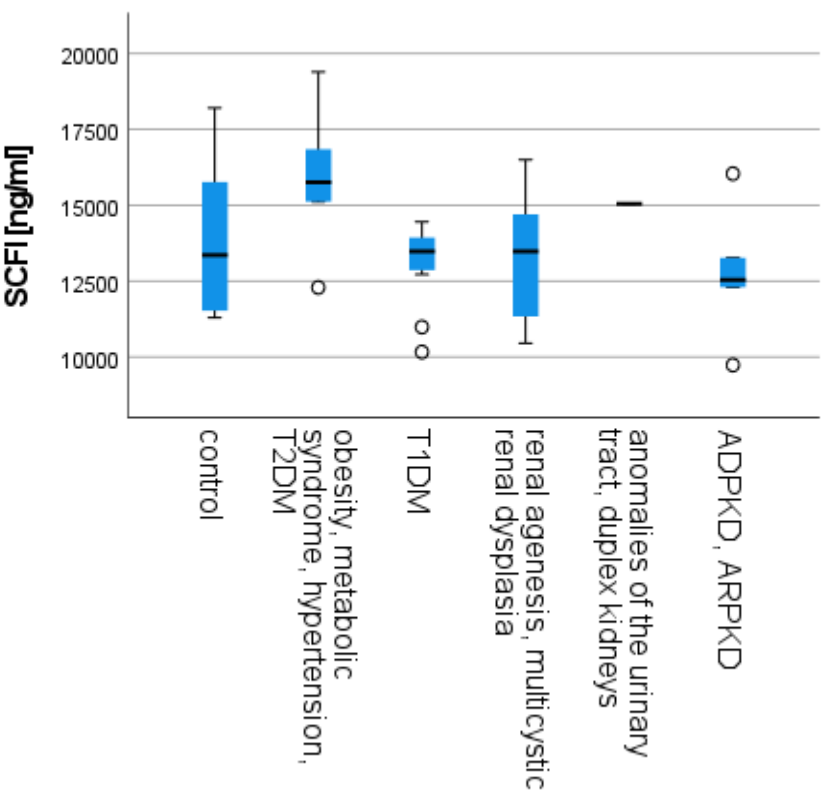
# Serum



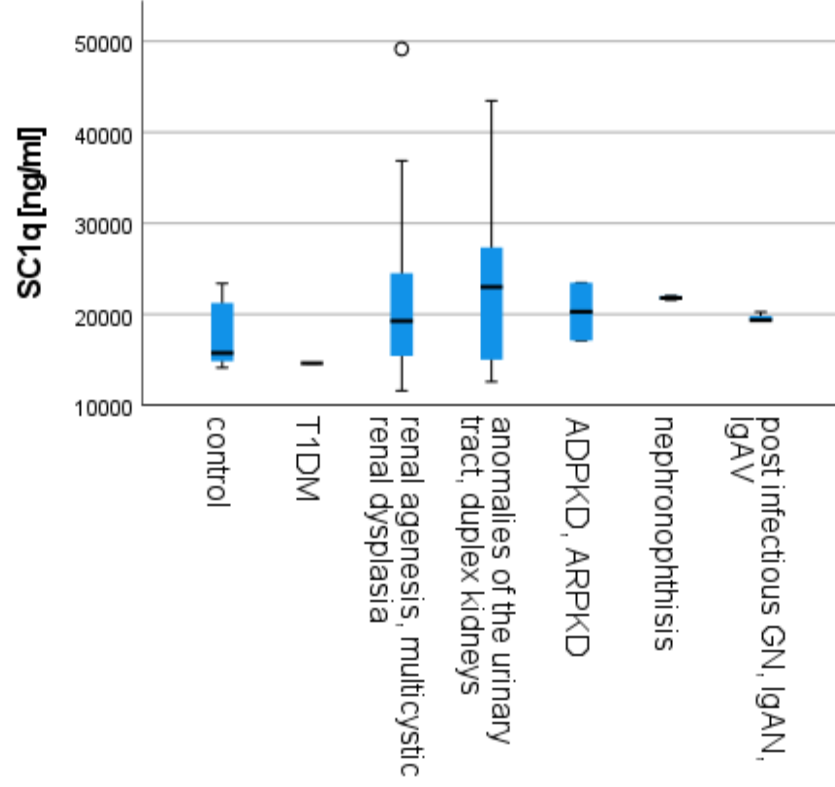
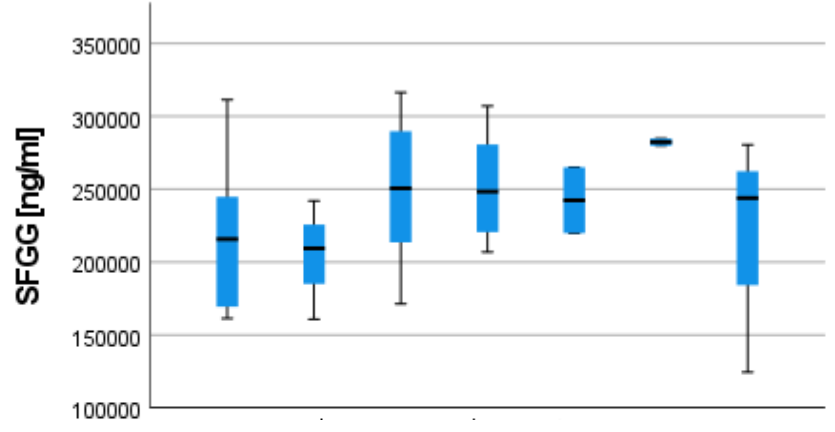






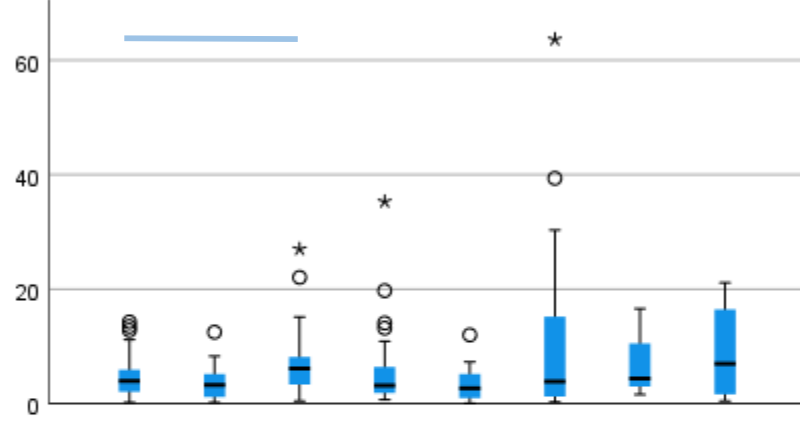




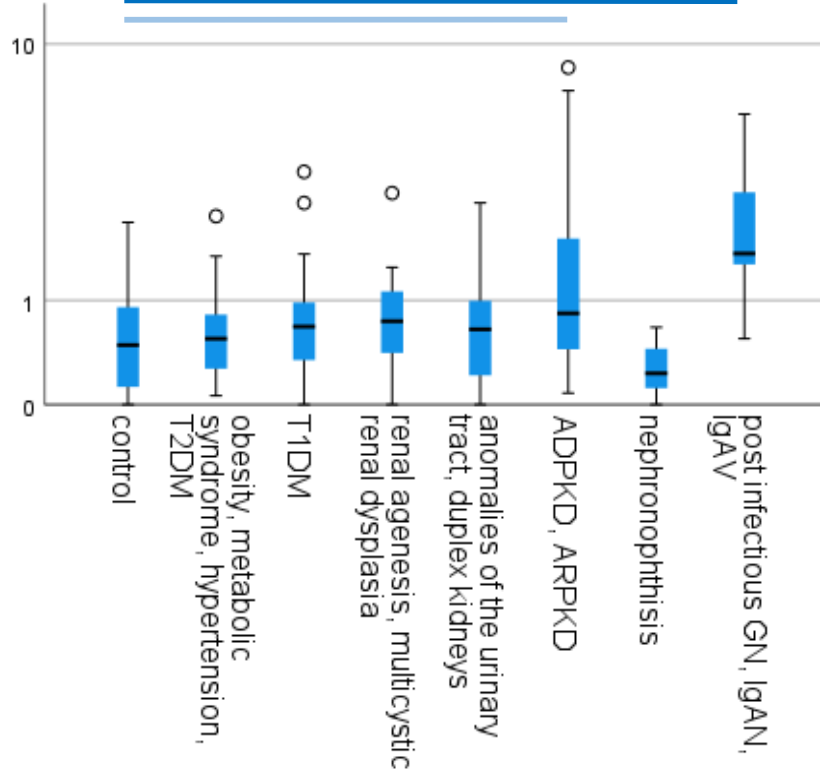


## Urine

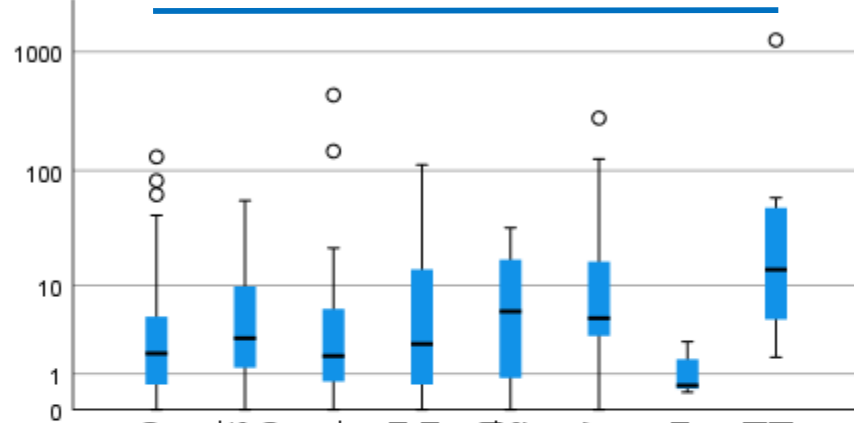
UADP [ng/mg creatinine]



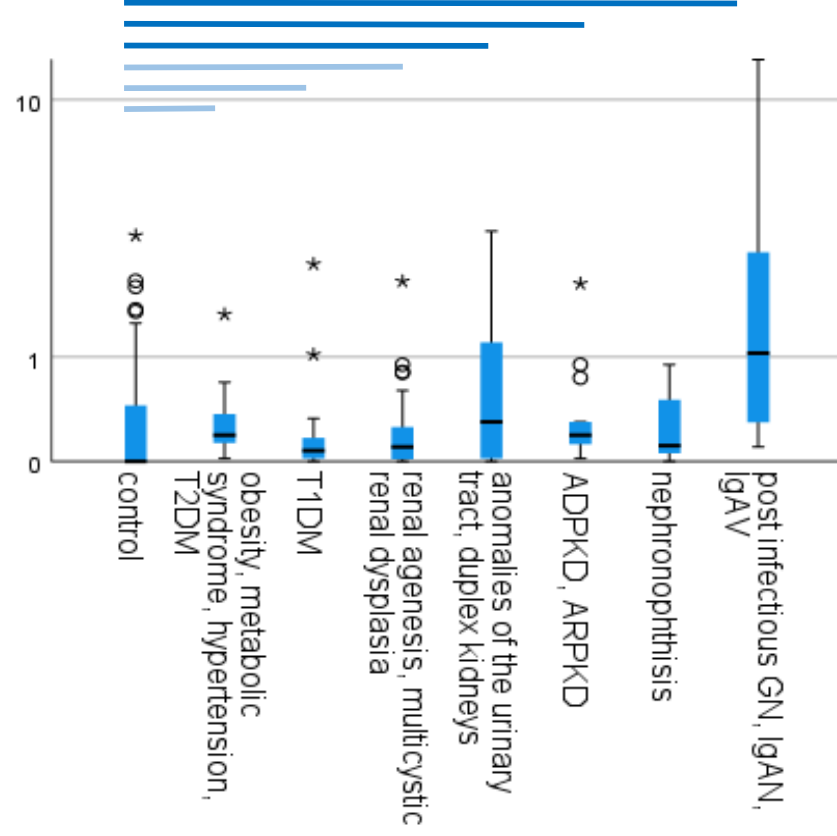
UAGT [ng/mg creatinine]



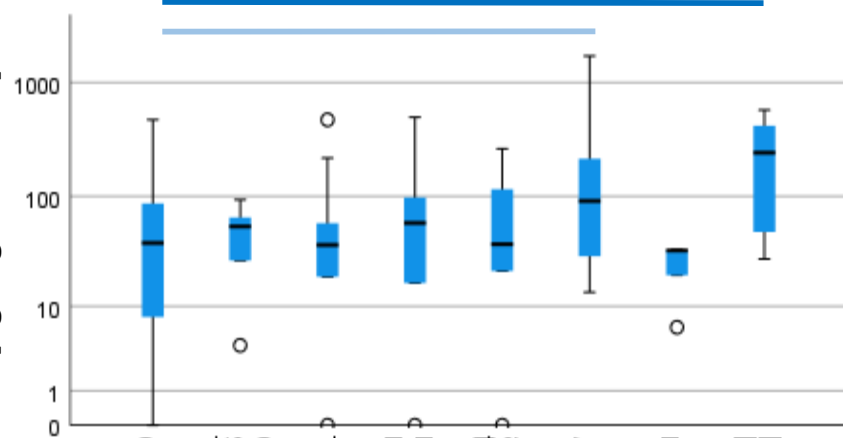
Ua1AGP [ng/mg creatinine]



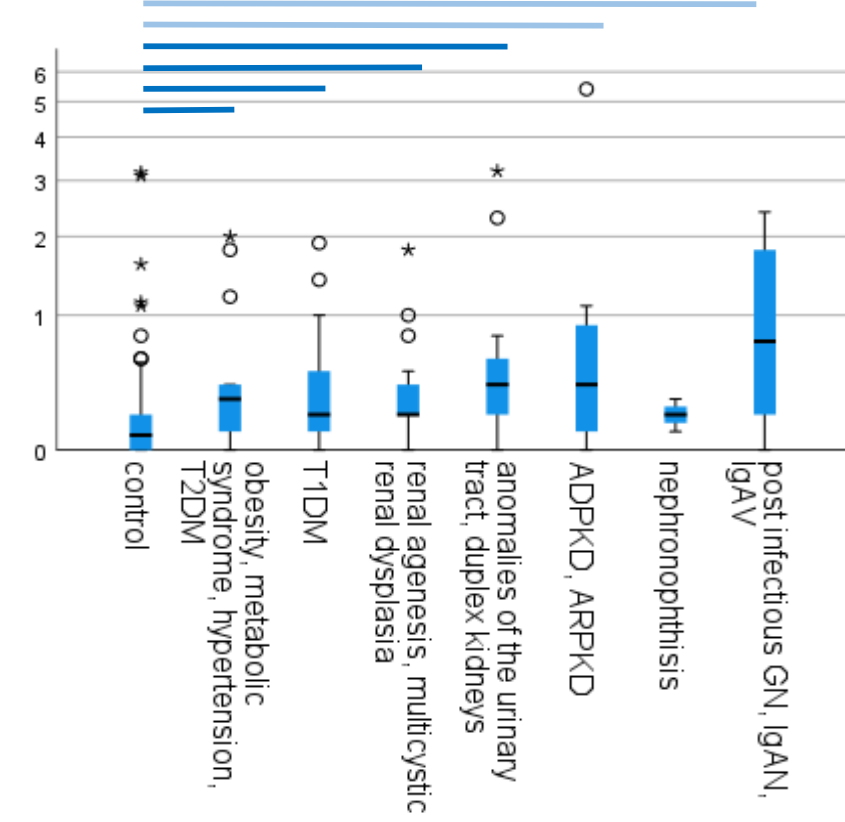
UCOLXIII [ng/mg creatinine]



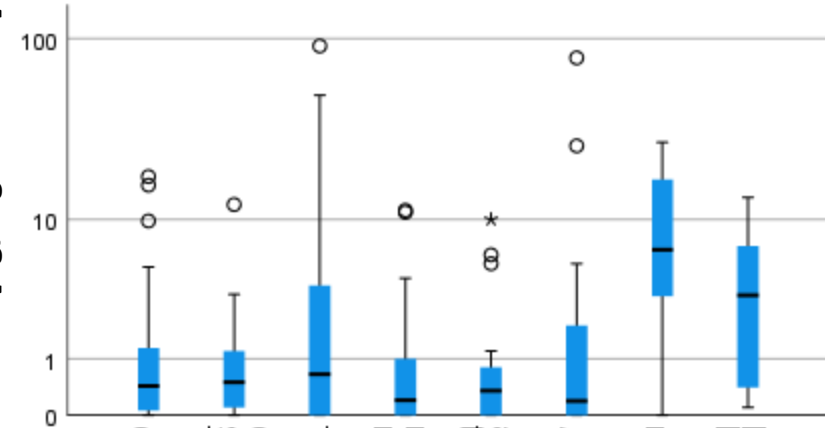
UGS [ng/mg creatinine]



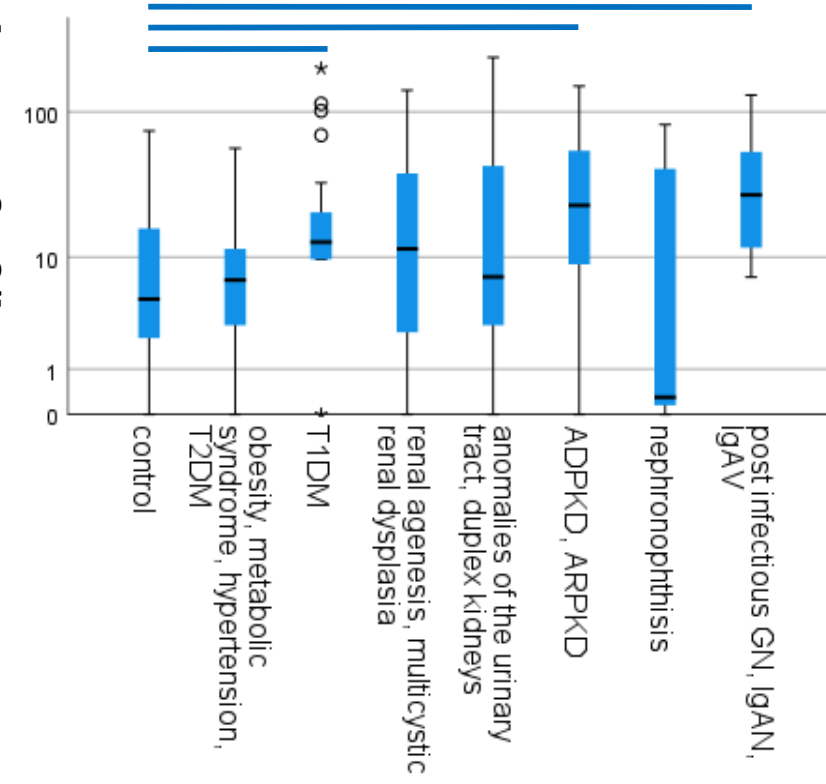
UHABP2 [ng/mg creatinine]

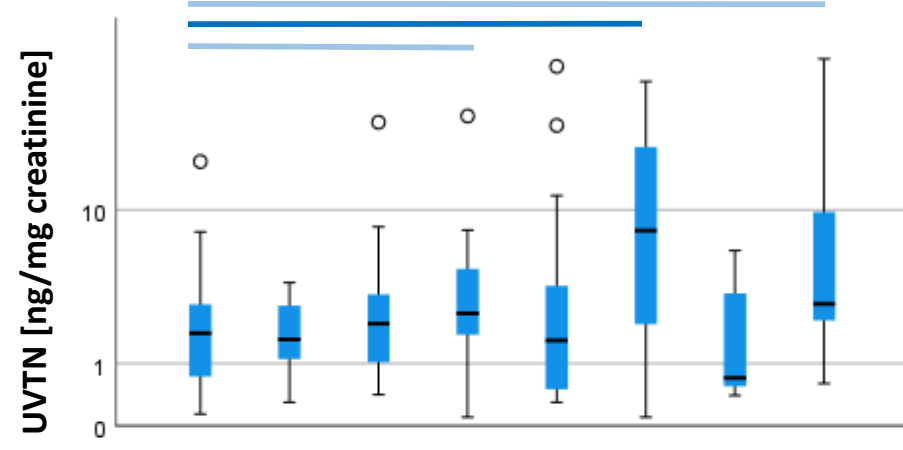
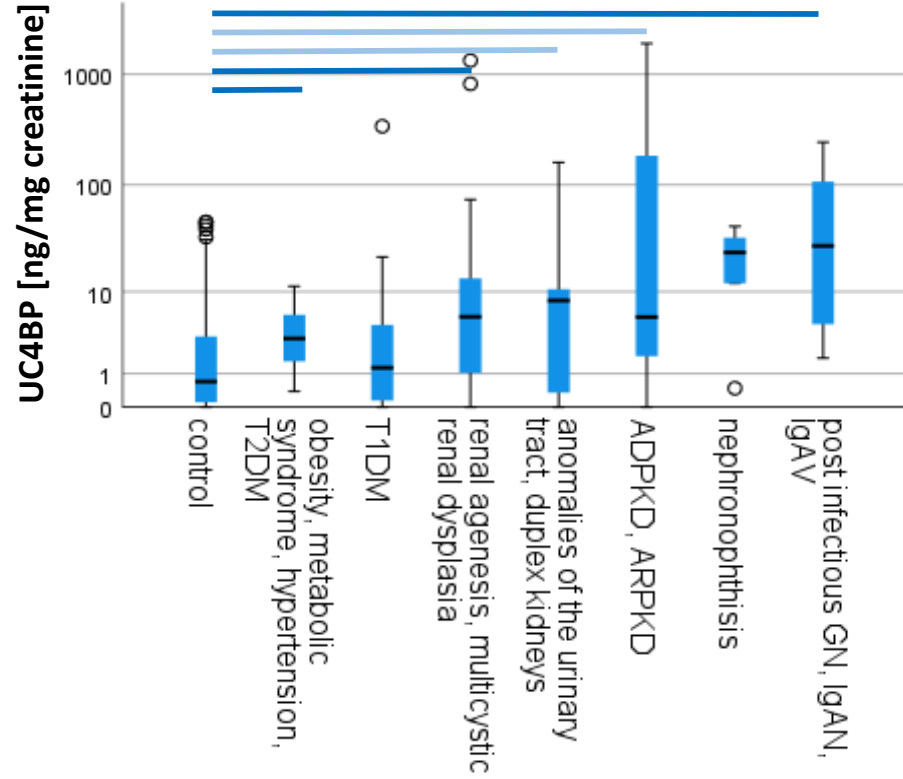
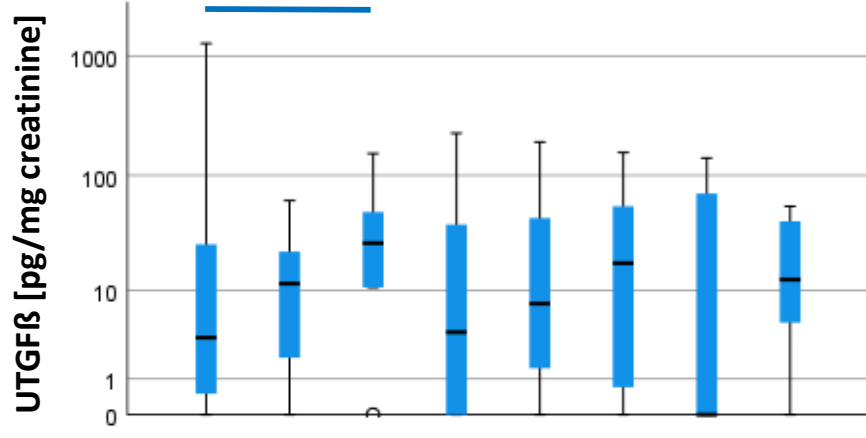
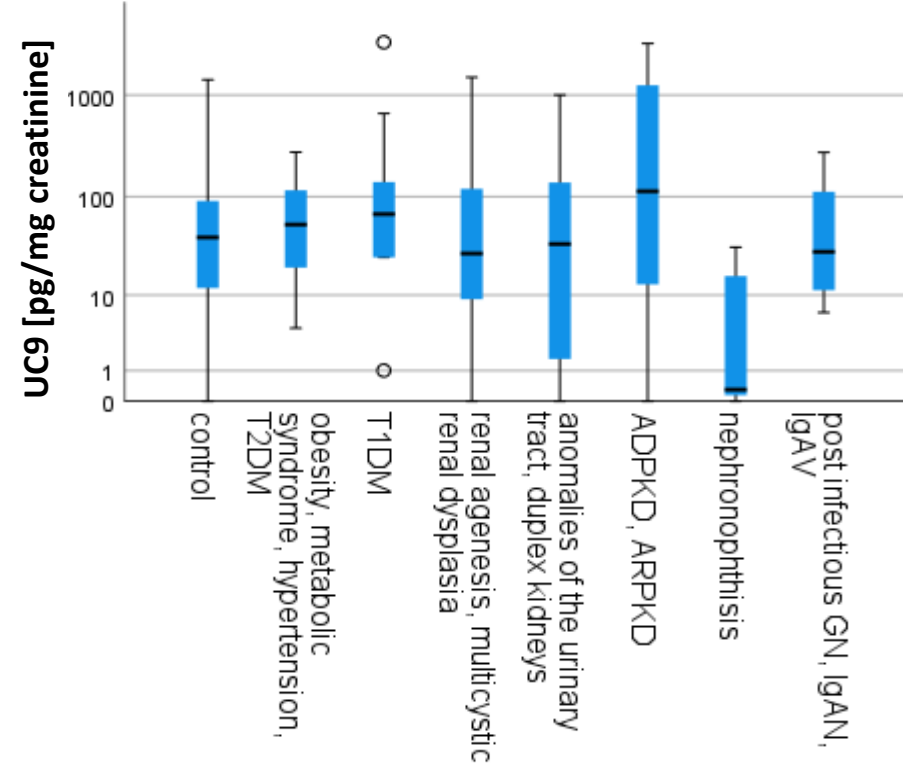


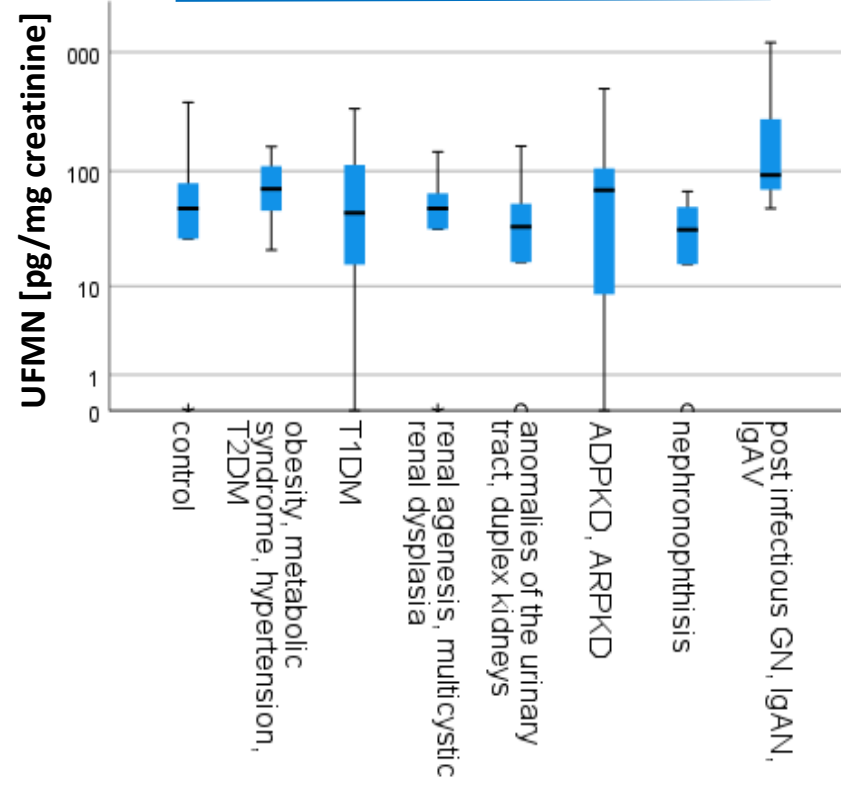
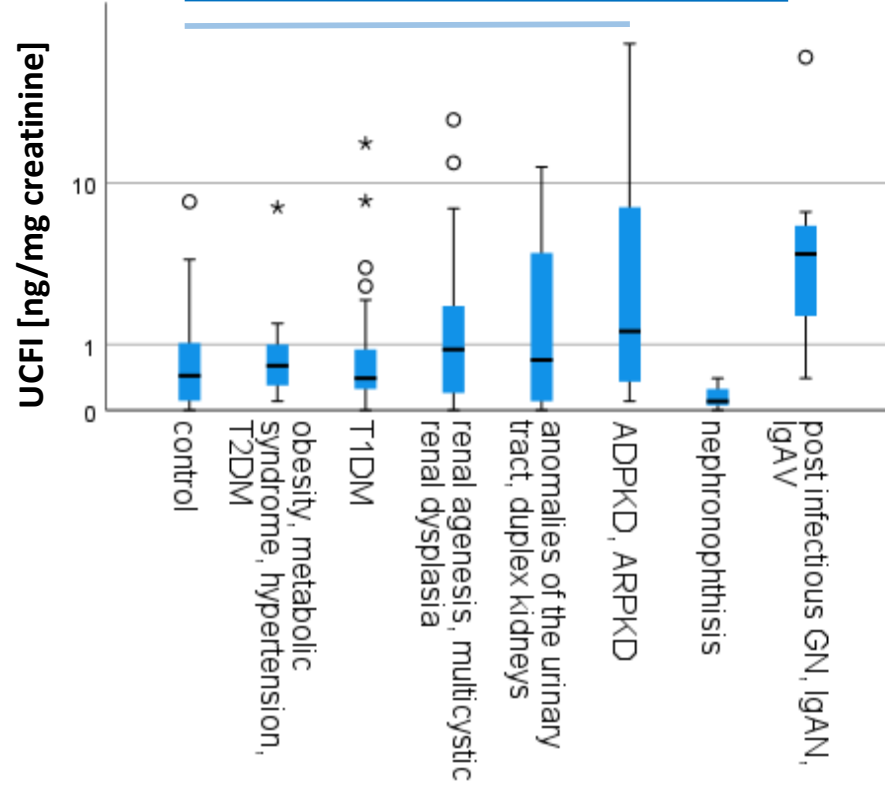
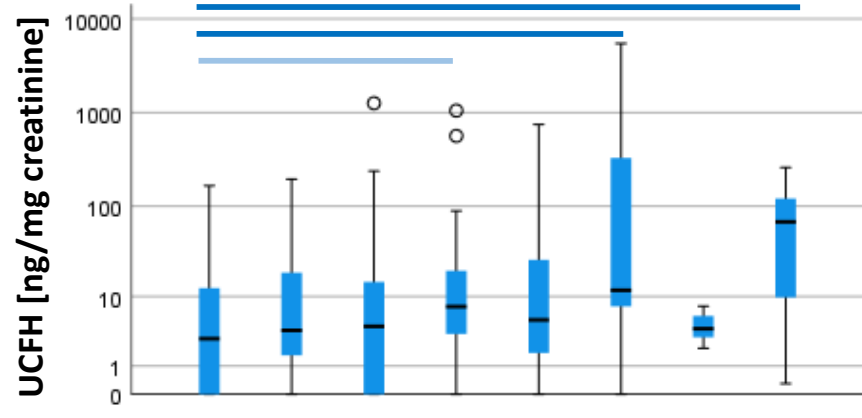
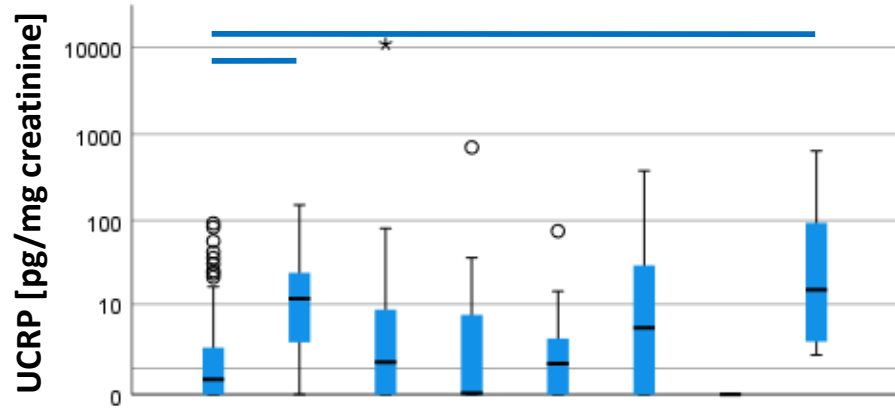
ULRGP1 [ng/mg creatinine]



UPICP [pg/mg creatinine]









**Supplementary Table S1: Specification of ELISA-Test kits applied**

<b>antigen</b>	<b>supplier</b>	<b>code</b>
angiotensinogen	Abbexa	abx573778
formin 1		abx387383
alpha-1-acid glycoprotein	Cloud-Clone	HEA816Hu
coagulation factor XIII B		CEB613Hu
complement C1q		SEA747Hu
complement factor H		SEA635Hu
complement factor I		SEB978Hu
collagen type XIII		SEC138Hu
c-reactive protein		SEA821Hu
fibronectin		USC-HEA037HU
ficolin		SEA786Hu
hemopexin		SEB986HU
gelsolin		SEA372Hu
C4 binding protein alpha		SEB620Hu
retinol binding protein 4		SEA929Hu
talin		SEA278Hu
leucine rich alpha-2-glycoprotein 1		HEB934Hu high sensitive
lumican	RayBiotech	ELH-LUM-1
serum amyloid A		ELH-SAA-1
vitronectin		ELH-VTN
carboxyterminal propeptide of type I procollagen	CUSABIO	CSB-E08079h
fibrinogen gamma chain		CSB-E13319h
alpha-trypsin inhibitor heavy chain H4		CSB-E17022h
hyaluronan-binding protein 2		CSB-EL010113HU
complement component C9		CSB-E14011h
serum amyloid A	Boster	BOS-EK1544, SAA/SAA1 PicoKine Kit
TGF- $\beta$ 1	Biovendor	BVD-RAF122R
adiponectin		BVD-RD191023100

The assays were performed according the suppliers instructions with the following modifications: all assays from Cloud-Clone and CUSABIO were performed with double incubation time to increase sensitivity. Samples were pre-incubated with 0.5% Tween 20 before measured of gelsolin to reach dilutional linearity. For the quantification of PICP, TGF- $\beta$ 1, and CRP in urine either incubation times were prolonged or concentrated specimens were applied. For that samples have been concentrated in Amicon® Ultra -15 Centrifugal filters (3K, UFC900324) by ~10 to ~60 fold depending on the starting volume available.

**Supplementary Tables S3 to S8: ROC analysis, comparison of BM values from patient's groups with healthy controls**

**Table S3: Patients with obesity, hypertension, metabolic syndrome, and T2DM (group A)**

BM	Cut-off	Sensitivity	1-specificity	AUC	BM*BM	Cut-off	Sensitivity	1-specificity	AUC
<b>serum</b>									
VTN	40.75	0.636	0.130	0.810					
CRP	19.78	0.765	0.346	0.769					
<b>urine</b>									
ColXIII	0.18	0.600	0.300	0.717	ColXIII*FMN	8.07	0.667	0.253	0.771
HABP2	0.19	0.615	0.306	0.726	C4BP*ColXIII	0.35	0.800	0.265	0.763
CRP	5.73	0.714	0.158	0.810	HABP2*FGG	212.9	0.462	0.173	0.736
					C4BP*ColXIII*HABP2	0.10	0.636	0.156	0.766

**Table S4: Patients with T1DM (group B)**

BM	Cut-off	Sensitivity	1-specificity	AUC	BM*BM	Cut-off	Sensitivity	1-specificity	AUC
<b>serum</b>									
PICP	34.65	0.786	0.211	0.838					
C9	5048.0	0.545	0.111	0.758					
<b>urine</b>									
TGFβ	13.69	0.659	0.293	0.652	ADP*PICP	44.04	0.651	0.242	0.718
CRP	2.52	0.516	0.253	0.626	HABP2*TGFβ	2.26	0.756	0.167	0.801
CFH	4.29	0.671	0.455	0.676					
CFI	0.70	0.516	0.354	0.605					



**Table S5: Patients with renal agenesis, hypoplasia, multicystic renal dysplasia (group C)**

BM	Cut-off	Sensitivity	1-specificity	AUC	BM*BM	Cut-off	Sensitivity	1-specificity	AUC
<b>urine</b>									
ColXIII	0.18	0.433	0.3	0.625	ColXIII*C4BP	0.7664	0.536	0.224	0.696
HABP2	0.185	0.778	0.306	0.714					
C4BP	5.53	0.515	0.16	0.685					

**Table S6: Patients with anomalies of the urinary tract, duplex kidneys (group D)**

BM	Cut-off	Sensitivity	1-specificity	AUC	BM*BM	Cut-off	Sensitivity	1-specificity	AUC
<b>serum</b>									
VTN	40.6	0.643	0.13	0.770					
<b>urine</b>									
ColXIII	0.18	0.611	0.300	0.692	C4BP*ColXIII*HABP2	0.55	0.462	0.115	0.661
HABP2	0.19	0.714	0.306	0.758					

**Table S7: Patients with post-infectious GN, IgAN, IgAV (group G)**

BM	Cut-off	Sensitivity	1-specificity	AUC	BM*BM	Cut-off	Sensitivity	1-specificity	AUC
<b>serum</b>									
CRP	31.345	0.750	0.231	0.774					
<b>urine</b>									
AGT	1.37	0.857	0.125	0.894	ADP*C4BP	26.9	0.714	0.121	0.870
CoIXIII	0.97	0.625	0.130	0.854	AGT*GS	220.5	0.667	0.052	0.872
GS	155.5	0.667	0.071	0.815	C4BP*CoIXIII	7.00	0.750	0.092	0.913
LRGP1	1.97	0.625	0.158	0.746	CoIXIII*FMN	70.9	0.625	0.101	0.888
VTN	3.27	0.500	0.158	0.730	GS*CFH	3601	0.667	0.111	0.840
C4BP	6.09	0.750	0.150	0.881	GS*VTN	380.2	0.667	0.081	0.847
CRP	4.08	0.750	0.208	0.867	GS*CFI	670.3	0.667	0.010	0.867
CFH	23.73	0.667	0.152	0.813	HABP2*FGG	1103	0.667	0.061	0.854
CFI	1.49	0.857	0.152	0.883	VTN*CFI	2.80	0.857	0.202	0.875
FMN	91.2	0.625	0.150	0.817	AGT*VTN	11.7	0.667	0.010	0.845
FGG	1408	0.875	0.178	0.906	CFH*CFI	116.1	0.667	0.071	0.875
					CFH*FGG	57539	0.667	0.061	0.862
					CFI*FGG	2152	0.857	0.101	0.921
					CFI*a1AGP	43.3	0.714	0.082	0.875
					C4BP*CoIXIII*HABP2	6.90	0.667	0.031	0.936

**Table S8: Entire patients (group A to G)**

BM	Cut-off	Sensitivity	1-specificity	AUC	BM*BM	Cut-off	Sensitivity	1-specificity	AUC
<b>serum</b>									
TGFβ	32.7	0.449	0.05	0.684					
<b>urine</b>									
ColXIII	0.02	0.837	0.38	0.703	ADP*C4BP	25.09	0.396	0.131	0.667
HABP2	0.25	0.586	0.224	0.757	ColXIII*FMN	0.23	0.766	0.330	0.706
C4BP	5.01	0.558	0.17	0.719	ColXIII*C4BP	0.001	0.822	0.381	0.742
CRP	2.52	0.516	0.253	0.626	HABP2*TGFβ	2.10	0.619	0.178	0.704
CFH	4.29	0.671	0.455	0.676	HABP2*FGG	143.4	0.595	0.255	0.744
CFI	0.70	0.516	0.354	0.605	ColXIII*HABP2*C4BP	0.08	0.552	0.156	0.721

**Tables S3 to S8:**

ROC analysis by SPSS (cf. Methods section). Only BMs with AUC >0.600 are shown.

Concentration ranges of BMs: Serum: ColXII, HABP2, PICP, TGF-β1 and C1q, ng/ml, GS, µg/ml.

Urine: ColXIII, HABP2, C4BP, CFH, CFI, FGG, GS, LRGP1, a1AGP, and C1q, ng/mg creatinine; CRP, C9 and FMN, pg/mg creatinine.

Pearson	ADP	a1AGP	AGT	Col-XIII	GS	LRGP1	HABP2	PICP	TGFβ	VTN	C9	C4BP	CRP	CFH	CFI	FMN	LUM	FGG	C1q	Spearman
ADP		0.284 <sup>b</sup> 0.000	0.380 <sup>b</sup> 0.000	-0.056 0.367	0.365 <sup>b</sup> 0.000	0.271 <sup>b</sup> 0.000	0.172 <sup>b</sup> 0.006	0.417 <sup>b</sup> 0.000	0.210 <sup>b</sup> 0.001	0.326 <sup>b</sup> 0.000	0.398 <sup>b</sup> 0.000	-0.049 0.417	-0.077 0.207	-0.042 0.497	0.281 <sup>b</sup> 0.000	0.193 <sup>b</sup> 0.002	-0.244 0.251	0.213 <sup>b</sup> 0.000	0.107 0.181	ADP
a1AGP	0.318 <sup>b</sup> 0.000		0.410 <sup>b</sup> 0.000	0.280 <sup>b</sup> 0.000	0.511 <sup>b</sup> 0.000	0.149 <sup>a</sup> 0.014	0.320 <sup>b</sup> 0.000	0.387 <sup>b</sup> 0.000	0.043 0.500	0.248 <sup>b</sup> 0.000	<b>0.652<sup>b</sup></b> 0.000	0.404 <sup>b</sup> 0.000	0.201 <sup>b</sup> 0.001	0.489 <sup>b</sup> 0.000	<b>0.703<sup>b</sup></b> 0.000	0.333 <sup>b</sup> 0.000	0.425 <sup>a</sup> 0.038	0.420 <sup>b</sup> 0.000	0.415 <sup>b</sup> 0.000	a1AGP
AGT	0.495 <sup>b</sup> 0.000	0.260 <sup>b</sup> 0.000		0.141 <sup>a</sup> 0.024	<b>0.746<sup>b</sup></b> 0.000	0.128 <sup>a</sup> 0.037	0.492 <sup>b</sup> 0.000	<b>0.517<sup>b</sup></b> 0.000	0.353 <sup>b</sup> 0.000	<b>0.694<sup>b</sup></b> 0.000	<b>0.570<sup>b</sup></b> 0.000	0.256 <sup>b</sup> 0.000	0.0098 0.116	0.186 <sup>b</sup> 0.003	<b>0.663<sup>b</sup></b> 0.000	0.372 <sup>b</sup> 0.000	<b>0.674<sup>b</sup></b> 0.000	<b>0.521<sup>b</sup></b> 0.000	0.342 <sup>b</sup> 0.000	AGT
Col-XIII	0.041 0.506	0.256 <sup>b</sup> 0.000	0.327 <sup>b</sup> 0.000		0.250 <sup>b</sup> 0.000	0.185 <sup>b</sup> 0.002	0.380 <sup>b</sup> 0.000	0.066 0.291	-0.178 <sup>b</sup> 0.005	-0.046 0.455	0.133 <sup>a</sup> 0.032	<b>0.527<sup>b</sup></b> 0.000	0.317 <sup>b</sup> 0.000	<b>0.529<sup>b</sup></b> 0.000	0.313 <sup>b</sup> 0.000	0.299 <sup>b</sup> 0.000	0.290 0.170	0.363 <sup>b</sup> 0.000	0.290 <sup>b</sup> 0.000	Col-XIII
GS	0.493 <sup>b</sup> 0.000	0.221 <sup>b</sup> 0.000	<b>0.702<sup>b</sup></b> 0.000	0.212 <sup>b</sup> 0.001		0.117 0.062	0.422 <sup>b</sup> 0.000	0.409 <sup>b</sup> 0.000	0.161 <sup>a</sup> 0.014	0.478 <sup>b</sup> 0.000	<b>0.603<sup>b</sup></b> 0.000	0.315 <sup>b</sup> 0.000	0.123 0.052	0.343 <sup>b</sup> 0.000	<b>0.751<sup>b</sup></b> 0.000	0.402 <sup>b</sup> 0.000	0.484 <sup>a</sup> 0.016	0.467 <sup>b</sup> 0.000	0.383 <sup>b</sup> 0.000	GS
LRGP1	0.251 <sup>b</sup> 0.000	0.095 0.119	0.258 <sup>b</sup> 0.000	0.108 0.079	0.088 0.159		0.154 <sup>a</sup> 0.014	0.091 0.134	0.045 0.482	0.047 0.437	0.098 0.111	0.330 <sup>b</sup> 0.000	0.243 <sup>b</sup> 0.000	0.228 <sup>b</sup> 0.000	0.177 <sup>b</sup> 0.004	0.354 <sup>b</sup> 0.000	0.431 <sup>a</sup> 0.035	0.336 <sup>b</sup> 0.000	0.350 <sup>b</sup> 0.000	LRGP1
HABP2	0.078 0.217	0.384 <sup>b</sup> 0.000	0.242 <sup>b</sup> 0.000	0.310 <sup>b</sup> 0.000	0.128 <sup>a</sup> 0.040	0.041 0.511		0.290 <sup>b</sup> 0.000	-0.049 0.459	0.258 <sup>b</sup> 0.000	0.337 <sup>b</sup> 0.000	0.367 <sup>b</sup> 0.000	0.228 <sup>b</sup> 0.000	0.326 <sup>b</sup> 0.000	0.458 <sup>b</sup> 0.000	0.364 <sup>b</sup> 0.000	<b>0.614<sup>b</sup></b> 0.001	0.374 <sup>b</sup> 0.000	0.176 <sup>a</sup> 0.028	HABP2
PICP	<b>0.584<sup>b</sup></b> 0.000	0.425 <sup>b</sup> 0.000	0.390 <sup>b</sup> 0.000	0.081 0.193	0.441 <sup>b</sup> 0.000	0.078 0.199	0.233 <sup>b</sup> 0.000		<b>0.511<sup>b</sup></b> 0.000	<b>0.561<sup>b</sup></b> 0.000	0.467 <sup>b</sup> 0.000	0.109 0.076	-0.032 0.590	0.121 0.051	0.493 <sup>b</sup> 0.000	0.063 0.307	0.144 0.511	0.325 <sup>b</sup> 0.000	0.267 <sup>b</sup> 0.001	PICP
TGFβ	0.039 0.542	0.144 <sup>a</sup> 0.024	0.030 0.645	0.070 0.274	0.018 0.780	-0.019 0.764	<b>0.586<sup>b</sup></b> 0.000	0.230 <sup>b</sup> 0.000		0.460 <sup>b</sup> 0.000	0.263 <sup>b</sup> 0.000	-0.155 <sup>a</sup> 0.015	-0.132 <sup>a</sup> 0.039	-0.088 0.176	0.167 <sup>b</sup> 0.010	0.042 0.511	0.060 0.779	0.162 <sup>a</sup> 0.011	0.232 <sup>b</sup> 0.006	TGFβ
VTN	0.416 <sup>b</sup> 0.000	0.463 <sup>b</sup> 0.000	<b>0.575<sup>b</sup></b> 0.000	0.046 0.451	<b>0.553<sup>b</sup></b> 0.000	0.259 <sup>b</sup> 0.000	0.162 <sup>b</sup> 0.009	0.456 <sup>b</sup> 0.000	0.010 0.870		<b>0.519<sup>b</sup></b> 0.000	0.127 <sup>a</sup> 0.036	-0.007 0.914	-0.030 0.627	0.459 <sup>b</sup> 0.000	0.112 0.069	0.436 <sup>a</sup> 0.033	0.405 <sup>b</sup> 0.000	0.224 <sup>b</sup> 0.005	VTN
C9	<b>0.560<sup>b</sup></b> 0.000	0.456 <sup>b</sup> 0.000	<b>0.563<sup>b</sup></b> 0.000	0.093 0.134	<b>0.531<sup>b</sup></b> 0.000	0.271 <sup>b</sup> 0.000	0.229 <sup>b</sup> 0.000	0.398 <sup>b</sup> 0.000	0.028 0.669	<b>0.626<sup>b</sup></b> 0.000		0.240 <sup>b</sup> 0.000	0.167 <sup>b</sup> 0.007	0.358 <sup>b</sup> 0.000	<b>0.704<sup>b</sup></b> 0.000	0.270 <sup>b</sup> 0.000	<b>0.535<sup>b</sup></b> 0.007	0.372 <sup>b</sup> 0.000	<b>0.502<sup>b</sup></b> 0.000	C9
C4BP	<b>0.548<sup>b</sup></b> 0.000	0.370 <sup>b</sup> 0.000	0.278 <sup>b</sup> 0.000	0.263 <sup>b</sup> 0.000	0.336 <sup>b</sup> 0.000	0.149 <sup>a</sup> 0.014	0.267 <sup>b</sup> 0.000	0.315 <sup>b</sup> 0.000	0.003 0.965	0.247 <sup>b</sup> 0.000	0.490 <sup>b</sup> 0.000		0.359 <sup>b</sup> 0.000	<b>0.577<sup>b</sup></b> 0.000	0.492 <sup>b</sup> 0.000	0.342 <sup>b</sup> 0.000	<b>0.713<sup>b</sup></b> 0.000	0.437 <sup>b</sup> 0.000	0.291 <sup>b</sup> 0.000	C4BP
CRP	-0.041 0.496	0.034 0.585	0.024 0.701	0.397 <sup>b</sup> 0.000	0.039 0.536	0.214 <sup>b</sup> 0.00	0.066 0.298	-0.033 0.581	-0.011 0.858	-0.016 0.788	0.001 0.983	0.123 <sup>a</sup> 0.044		0.309 <sup>b</sup> 0.000	0.272 <sup>b</sup> 0.000	0.255 <sup>b</sup> 0.000	<b>0.574<sup>b</sup></b> 0.003	0.244 <sup>b</sup> 0.000	0.272 <sup>b</sup> 0.001	CRP
CFH	0.411 <sup>b</sup> 0.000	0.237 <sup>b</sup> 0.000	0.545 <sup>b</sup> 0.000	0.252 <sup>b</sup> 0.000	<b>0.747<sup>b</sup></b> 0.000	0.173 <sup>b</sup> 0.005	0.352 <sup>b</sup> 0.000	0.315 <sup>b</sup> 0.000	0.010 0.872	0.486 <sup>b</sup> 0.000	<b>0.560<sup>b</sup></b> 0.000	0.444 <sup>b</sup> 0.000	0.101 0.104		0.490 <sup>b</sup> 0.000	0.339 <sup>b</sup> 0.000	0.460 <sup>a</sup> 0.024	0.306 <sup>b</sup> 0.000	0.393 <sup>b</sup> 0.000	CFH
CFI	0.409 <sup>b</sup> 0.000	0.596 <sup>b</sup> 0.00	0.484 <sup>b</sup> 0.000	0.229 <sup>b</sup> 0.000	<b>0.686<sup>b</sup></b> 0.000	0.082 0.182	0.467 <sup>b</sup> 0.000	0.446 <sup>b</sup> 0.000	0.029 0.655	<b>0.601<sup>b</sup></b> 0.000	0.486 <sup>b</sup> 0.000	0.474 <sup>b</sup> 0.000	0.069 0.268	<b>0.740<sup>b</sup></b> 0.000		0.367 <sup>b</sup> 0.000	<b>0.516<sup>b</sup></b> 0.010	0.497 <sup>b</sup> 0.000	<b>0.545<sup>b</sup></b> 0.000	CFI
FMN	0.122 <sup>a</sup> 0.047	0.383 <sup>b</sup> 0.000	0.371 <sup>b</sup> 0.000	<b>0.569<sup>b</sup></b> 0.000	0.138 <sup>a</sup> 0.030	0.096 0.116	0.464 <sup>b</sup> 0.000	0.140 <sup>a</sup> 0.022	0.011 0.867	0.094 0.129	0.178 <sup>b</sup> 0.004	0.388 <sup>b</sup> 0.000	0.167 <sup>b</sup> 0.006	0.330 <sup>b</sup> 0.000	0.314 <sup>b</sup> 0.000		<b>0.772<sup>b</sup></b> 0.000	0.346 <sup>b</sup> 0.000	0.352 <sup>b</sup> 0.000	FMN
LUM	-0.086 0.689	0.230 0.279	0.505 <sup>a</sup> 0.012	0.121 0.572	0.152 0.477	0.087 0.686	0.241 0.256	-0.093 0.671	0.292 0.166	0.156 0.465	0.132 0.537	0.475 <sup>a</sup> 0.019	0.026 0.903	0.191 0.372	0.116 0.589	<b>0.633<sup>b</sup></b> 0.002		<b>0.569<sup>b</sup></b> 0.006	0.317 0.141	LUM
FGG	0.176 <sup>b</sup> 0.004	0.343 <sup>b</sup> 0.000	0.401 <sup>b</sup> 0.000	0.452 <sup>b</sup> 0.000	0.284 <sup>b</sup> 0.000	0.154 <sup>a</sup> 0.011	<b>0.600<sup>b</sup></b> 0.000	0.192 <sup>b</sup> 0.002	0.019 0.770	0.323 <sup>b</sup> 0.000	0.353 <sup>b</sup> 0.000	0.397 <sup>b</sup> 0.000	0.201 <sup>b</sup> 0.001	<b>0.527<sup>b</sup></b> 0.000	<b>0.560<sup>b</sup></b> 0.000	<b>0.730<sup>b</sup></b> 0.000	0.411 0.057		0.396 <sup>b</sup> 0.000	FGG
C1q	-0.024 0.766	0.020 0.801	-0.030 0.710	0.318 <sup>b</sup> 0.000	0.022 0.783	<b>0.694<sup>b</sup></b> 0.000	0.035 0.665	0.005 0.955	0.017 0.841	0.021 0.795	0.041 0.611	0.215 <sup>b</sup> 0.007	<b>0.558<sup>b</sup></b> 0.000	0.456 <sup>b</sup> 0.000	0.124 0.121	0.073 0.369	-0.124 0.575	0.089 0.268		C1q

**Supplementary Table S2: Correlation of each BM in urine with each other's.**

Analyses were performed by SPSS (v.27) . Lower left halve: correlation according Pearson; upper right halve: correlation according Spearman. Each cell shows the correlation coefficient (upper figure) and a p-value (lower figure).

<sup>a</sup> and <sup>b</sup> indicate significant and highly significant correlations proposed by SPSS. Notwithstanding that, we set a correlation coefficient >0.500 moderately significant and >0.600 highly significant and mark these values by blue (Pearson) and green (Spearman) filling.

# Supplementary Table S9 to S11:

## Sub-group of healthy controls

Table S9: Correlation of serum and urinary BM candidates with BMI z-score

BM in → ↓	BMI z-score					
	Serum			Urine		
	Pearson	Spearman.	n	Pearson	Spearman.	n
<b>ADP</b>	-0.358	-0.417	12	0.077	0.059	99
	0.253	0.178		0.447	0.561	
<b>a1AGP</b>	-0.188	-0.104	15	-0.027	-0.092	98
	0.502	0.713		0.792	0.370	
<b>AGT</b>	0.005	-0.004	12	0.125	0.085	94
	0.988	0.991		0.23	0.415	
<b>ColXIII</b>	0.255	0.392	12	-0.045	0.044	99
	0.424	0.207		0.659	0.664	
<b>GS</b>	0.150	0.067	12	0.077	-0.034	97
	0.641	0.837		0.454	0.742	
<b>LRGP1</b>	-0.159	-0.184	23	0.199 <sup>a</sup>	-0.029	99
	0.467	0.401		0.049	0.779	
<b>HABP2</b>	-0.075	-0.049	12	-0.031	0.002	96
	0.817	0.880		0.762	0.981	
<b>PICP</b>	0.136	-0.033	18	-0.050	-0.119	99
	0.590	0.896		0.624	0.240	
<b>TGFβ</b>	-0.318	-0.306	18	-0.027	-0.158	92
	0.198	0.217		0.802	0.132	
<b>VTN</b>	-0.087	-0.097	23	0.070	-0.041	99
	0.693	0.674		0.488	0.683	
<b>C9</b>	-0.061	-0.321	7	-0.090	-0.071	97
	0.897	0.482		0.383	0.491	
<b>C4BP</b>	-0.132	-0.319	12	-0.085	-0.201 <sup>a</sup>	99
	0.684	0.313		0.405	0.047	
<b>CRP</b>	-0.230	-0.118	24	0.014	0.071	100
	0.279	0.583		0.890	0.484	
<b>FMN</b>	0.065	0.189	12	-0.043	-0.072	99
	0.840	0.556		0.672	0.484	
<b>CFH</b>			3	-0.043	-0.084	98
				0.678	0.416	
<b>CFI</b>	-0.053	-0.286	7	-0.094	-0.163	98
	0.910	0.535		0.361	0.111	
<b>FGG</b>	-0.271	-0.495	14	0.035	0.027	99
	0.349	0.072		0.731	0.794	
<b>C1q</b>	-0.190	-0.305	11	-0.227 <sup>a</sup>	-0.235 <sup>a</sup>	86
	0.576	0.361		0.035	0.030	

Analyses were performed by SPSS (v.27). Each cell shows the correlation coefficient (upper figure) and a p-value (lower figure).

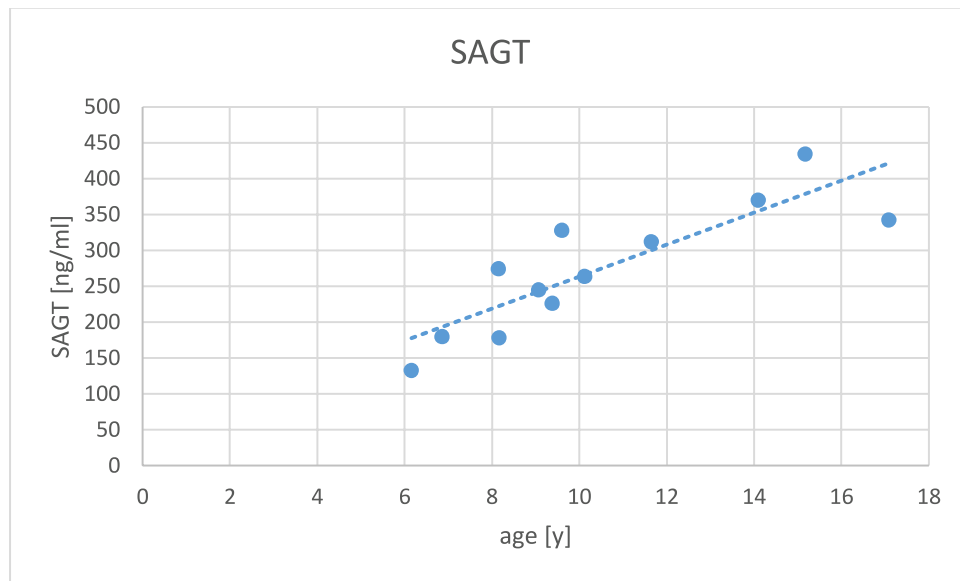
<sup>a</sup> and <sup>b</sup> indicate significant and highly significant correlations proposed by SPSS. Notwithstanding that, we set a correlation coefficient >0.500 moderately significant and >0.600 highly significant and mark these values by grey filling.

Table S10: Correlation of serum and urinary BM candidates with age

BM in → ↓	Age [y]					
	Serum			Urine		
	Pearson	Spearman.	n	Pearson	Spearman.	n
ADP	-0.264	-0.343	12	-0.249 <sup>a</sup>	-0.227 <sup>a</sup>	101
	0.408	0.276		0.012	0.023	
a1AGP	-0.311	-0.323	17	0.027	-0.123	100
	0.224	0.206		0.787	0.222	
AGT	0.858 <sup>b</sup>	0.860 <sup>b</sup>	12	-0.274 <sup>b</sup>	-0.230 <sup>a</sup>	96
	<0.001	<0.001		0.007	0.024	
ColXIII	-0.487	-0.49	12	0.183	0.364 <sup>b</sup>	100
	0.108	0.106		0.068	<0.001	
GS	0.429	0.483	12	-0.293 <sup>b</sup>	-0.174	99
	0.164	0.112		0.003	0.085	
LRGP1	0.173	0.142	25	-0.151	-0.191	101
	0.408	0.497		0.132	0.056	
HABP2	0.314	0.364	12	0.176	-0.021	98
	0.320	0.245		0.084	0.839	
PICP	0.461 <sup>a</sup>	0.318	20	-0.098	-0.010	101
	0.041	0.172		0.332	0.924	
TGFβ	0.368	0.366	20	-0.213 <sup>a</sup>	-0.276 <sup>b</sup>	93
	0.111	0.112		0.040	0.007	
VTN	0.243	0.280	23	-0.289 <sup>b</sup>	-0.334 <sup>b</sup>	101
	0.265	0.195		0.003	<0.001	
C9	0.583	0.583	9	-0.132	-0.241 <sup>a</sup>	99
	0.100	0.099		0.194	0.016	
C4BP	0.075	0.217	12	0.040	0.030	100
	0.817	0.499		0.695	0.765	
CRP	-0.331	-0.039	26	-0.022	0.013	101
	0.098	0.850		0.824	0.898	
FMN	0.073	-0.027	13	-0.238 <sup>a</sup>	-0.102	100
	0.814	0.929		0.017	0.311	
CFH			3	0.058	0.062	99
				0.571	0.539	
CFI	0.165	0.333	9	-0.095	-0.155	99
	0.672	0.381		0.351	0.125	
FGG	-0.149	-0.160	14	-0.127	-0.151	101
	0.612	0.584		0.205	0.133	
C1q	0.888 <sup>b</sup>	0.791 <sup>b</sup>	11	-0.150	-0.224 <sup>a</sup>	86
	<0.001	0.004		0.168	0.038	

## Graphical visualization of correlations considered significant

### Serum angiotensinogen and age



### Serum complement component C1q and age

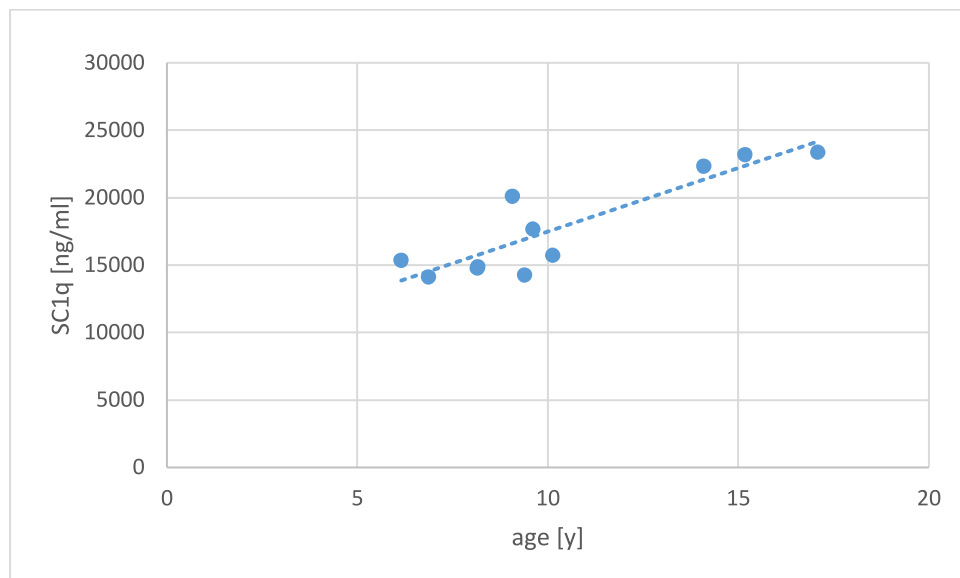


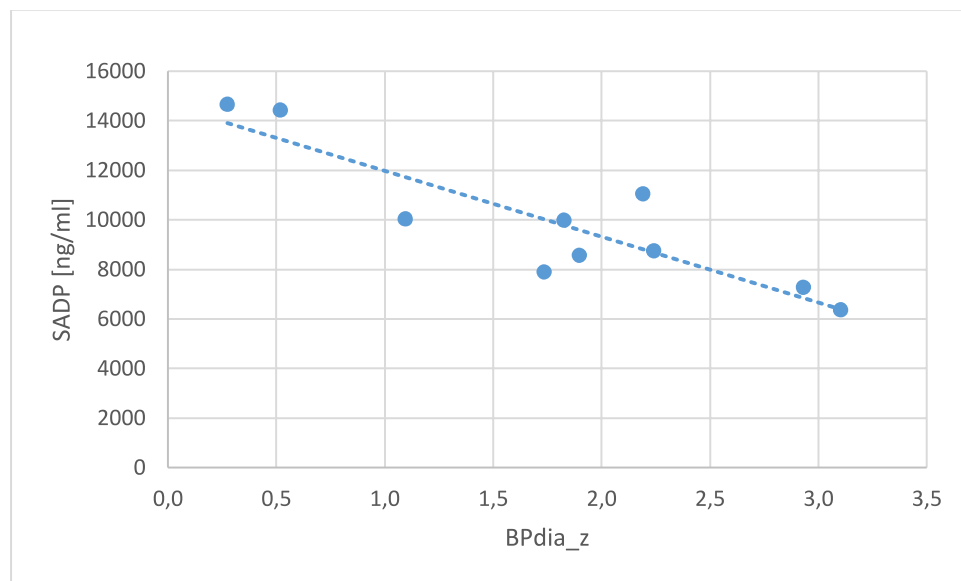


Table S11: Correlation of serum and urinary BM candidates with blood pressure z-score

BM in → ↓	Systolic blood pressure z-score						Diastolic blood pressure z-score					
	Serum			Urine			Serum			Urine		
	Pears.	Spearm.	n	Pears.	Spearm.	n	Pears.	Spearm.	n	Pears.	Spearm.	n
ADP	-0.312	-0.255	10	0.081	-0.008	97	-0.883 <sup>b</sup>	-0.770 <sup>b</sup>	10	0.040	0.001	97
	0.380	0.476		0.431	0.937		<0.001	0.009		0.695	0.993	
a1AGP	0.276	0.481	15	0.202 <sup>a</sup>	0.091	96	-0.116	-0.011	15	0.202 <sup>a</sup>	0.106	96
	0.319	0.069		0.048	0.377		0.680	0.970		0.048	0.302	
AGT	0.452	0.401	10	0.248 <sup>a</sup>	0.217 <sup>a</sup>	92	0.323	0.224	10	0.245 <sup>a</sup>	0.235 <sup>a</sup>	92
	0.189	0.250		0.017	0.038		0.362	0.533		0.019	0.024	
ColXIII	-0.363	-0.413	10	0.011	0.108	97	0.208	0.006	10	0.029	0.065	97
	0.303	0.235		0.913	0.292		0.565	0.987		0.779	0.525	
GS	0.605	0.596	10	-0.074	-0.022	95	0.325	0.297	10	0.101	0.041	95
	0.064	0.069		0.476	0.834		0.359	0.405		0.331	0.69	
LRGP1	-0.214	-0.382	21	0.097	0.045	97	0.031	-0.212	21	0.087	0.112	97
	0.352	0.087		0.344	0.659		0.893	0.355		0.397	0.277	
HABP2	0.259	0.419	10	0.352 <sup>b</sup>	0.122	94	-0.600	-0.648 <sup>a</sup>	10	0.219 <sup>a</sup>	0.189	94
	0.470	0.228		<0.001	0.240		0.066	0.043		0.034	0.068	
PICP	-0.190	-0.187	16	0.061	0.098	97	-0.392	-0.476	16	0.136	0.189	97
	0.481	0.488		0.553	0.338		0.133	0.062		0.186	0.064	
TGFB	0.073	0.178	16	0.121	0.082	92	-0.047	-0.038	16	0.041	0.093	92
	0.787	0.509		0.250	0.438		0.863	0.888		0.699	0.377	
VTN	-0.002	-0.004	19	0.016	0.171	97	-0.184	-0.140	19	0.185	0.235 <sup>a</sup>	97
	0.994	0.986		0.879	0.094		0.451	0.567		0.07	0.021	
C9	0.154	0.036	7	-0.123	-0.081	95	-0.499	-0.429	7	-0.071	-0.047	95
	0.742	0.939		0.235	0.434		0.255	0.337		0.492	0.652	
C4BP	0.401	0.231	10	0.234 <sup>a</sup>	-0.015	96	0.159	0.055	10	0.324 <sup>b</sup>	0.170	96
	0.251	0.521		0.022	0.887		0.661	0.881		0.001	0.098	
CRP	-0.266	-0.142	22	-0.030	-0.060	97	-0.217	-0.277	22	0.019	-0.041	97
	0.231	0.529		0.771	0.557		0.333	0.212		0.85	0.689	
FMN	0.118	0.164	10	-0.004	-0.002	96	0.069	-0.164	10	0.002	-0.014	96
	0.745	0.650		0.973	0.982		0.850	0.651		0.984	0.891	
CFH			3	0.056	0.040	95			3	0.134	0.117	95
				0.588	0.701					0.196	0.261	
CFI	0.643	0.714	7	0.128	0.055	95	0.341	0.143	7	0.208 <sup>a</sup>	0.128	95
	0.120	0.071		0.218	0.594		0.454	0.760		0.044	0.215	
FGG	-0.059	-0.042	12	0.183	0.123	97	-0.227	-0.126	12	0.212 <sup>a</sup>	0.147	97
	0.855	0.897		0.074	0.231		0.478	0.697		0.037	0.150	
C1q	0.613	0.444	9	-0.139	-0.075	83	0.053	-0.133	9	-0.122	-0.102	83
	0.079	0.232		0.211	0.502		0.892	0.732		0.272	0.360	

## Graphical visualization of the correlation considered significant

Serum adiponectin and diastolic blood pressure.



Supplementary Tables S12 to S15:

Patients with obesity, hypertension, metabolic syndrome, and T2DM (group A)

Table S12: Correlation of serum and urinary BM candidates with UACR and blood glucose

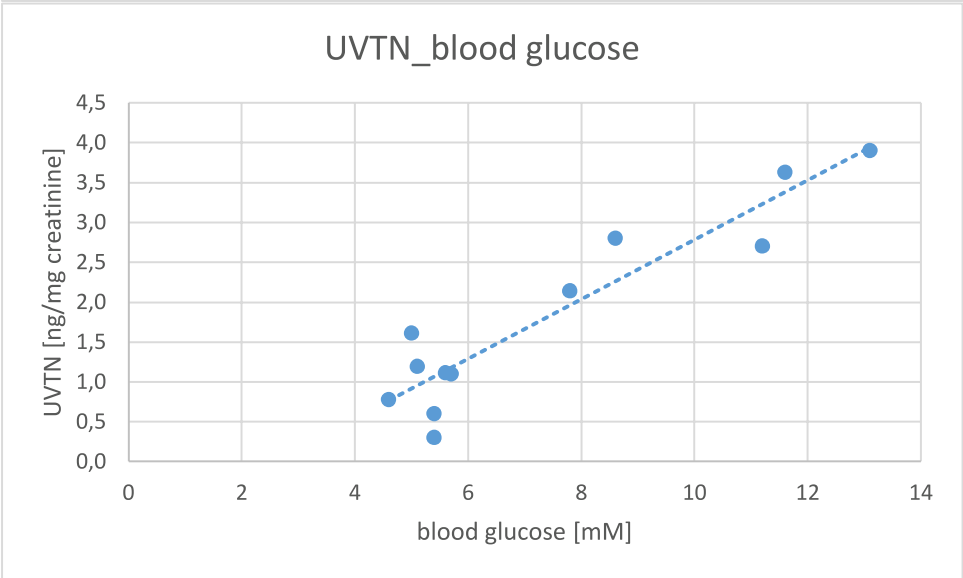
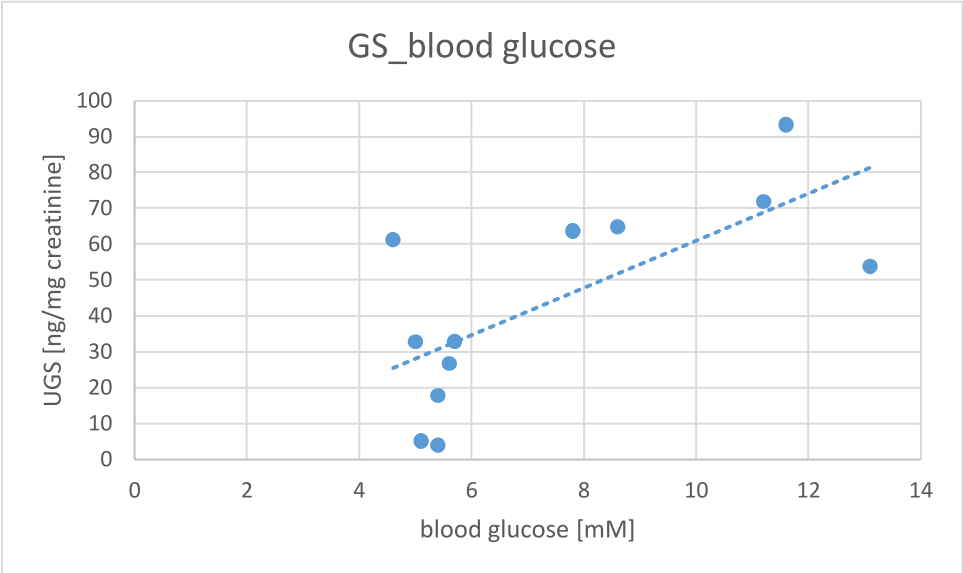
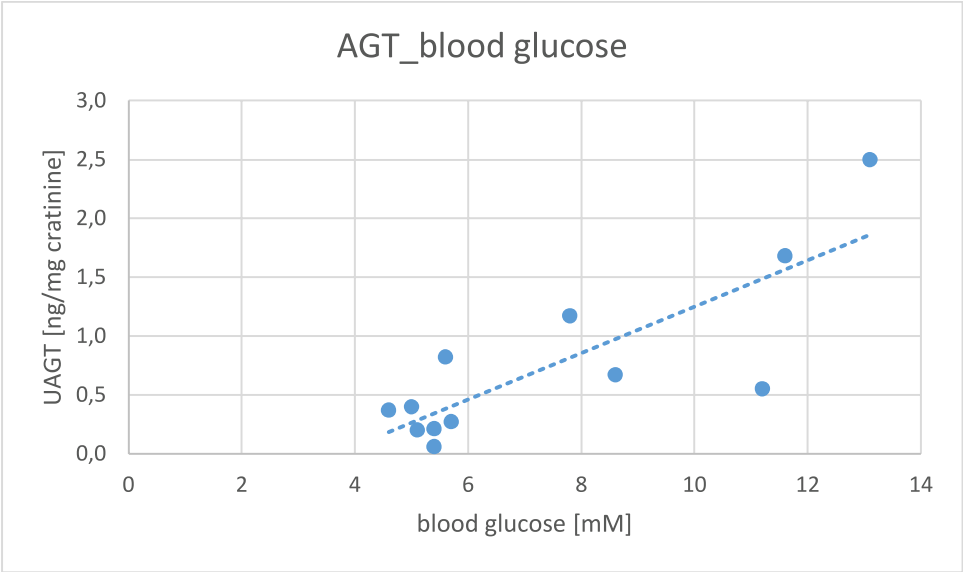
BM in→ ↓	UACR						blood glucose					
	Serum			Urine			Serum			Urine		
	Pearson	Spearman	n	Pearson	Spearman	n	Pearson	Spearman	n	Pearson	Spearman	n
ADP			0	-0.046 0.881	0.110 0.720	13			0	0.120 0.710	0.088 0.787	12
a1AGP	-0.003 0.993	-0.088 0.808	10	0.049 0.874	0.490 0.089	13	-0.546 0.102	-0.576 0.081	10	0.271 0.394	0.046 0.888	12
AGT			0	-0.240 0.429	-0.063 0.837	13			0	0.819 <sup>b</sup> 0.001	0.722 <sup>b</sup> 0.008	12
ColXIII			0	-0.031 0.932	0.381 0.277	10			0	-0.289 0.450	-0.319 0.402	9
GS			0	-0.043 0.889	0.157 0.608	13			0	0.700 <sup>a</sup> 0.011	0.623 <sup>a</sup> 0.030	12
LRGP1	-0.172 0.523	-0.109 0.688	16	0.098 0.749	0.374 0.207	13	-0.016 0.956	-0.084 0.766	15	-0.135 0.677	-0.145 0.653	12
HABP2			0	-0.149 0.627	0.133 0.665	13			0	0.027 0.933	-0.141 0.662	12
PICP	0.437 0.327	0.450 0.310	7	0.073 0.803	0.526 0.053	14	0.227 0.624	0.018 0.969	7	0.397 0.179	-0.011 0.971	13
TGFβ			0	0.143 0.674	0.304 0.364	11	-0.329 0.471	-0.360 0.427	7	0.148 0.682	0.204 0.571	10
VTN	-0.300 0.370	-0.656 <sup>a</sup> 0.028	11	-0.189 0.536	-0.025 0.936	13	0.160 0.658	0.128 0.725	10	0.934 <sup>b</sup> <0.001	0.760 <sup>b</sup> 0.004	12
C9	-0.620 0.137	-0.847 <sup>a</sup> 0.016	7	-0.039 0.900	0.353 0.237	13	0.081 0.863	0.234 0.613	7	0.664 <sup>a</sup> 0.019	0.560 0.058	12
C4BP			0	-0.498 0.083	-0.383 0.197	13			0	0.304 0.337	0.483 0.111	12
CRP	-0.509 <sup>a</sup> 0.037	-0.628 <sup>b</sup> 0.007	17	-0.467 0.093	-0.599 <sup>a</sup> 0.024	14	0.084 0.758	0.109 0.688	16	-0.156 0.610	-0.063 0.837	13
FMN			0	-0.277 0.384	-0.165 0.609	12			3	-0.048 0.890	-0.191 0.574	11
CFH			0	-0.034 0.912	0.328 0.274	13			0	0.403 0.194	0.158 0.625	12
CFI	0.090 0.848	0.414 0.355	7	0.051 0.868	0.486 0.092	13	-0.660 0.107	-0.144 0.758	7	0.461 0.132	0.258 0.417	12
FGG			0	-0.075 0.808	0.240 0.430	13			0	0.438 0.154	0.445 0.147	12

Analyses were performed by SPSS (v.27). Each cell shows the correlation coefficient (upper figure) and a p-value (lower figure).

<sup>a</sup> and <sup>b</sup> indicate significant and highly significant correlations proposed by SPSS. Notwithstanding that, we set a correlation coefficient >0.500 moderately significant and >0.600 highly significant and mark these values by grey filling.

Graphical visualization of correlations considered as significant:

Urinary angiotensinogen (AGT), gelsolin (GS), vitronectin (VTN), and complement component C9 (C9) with blood glucose concentration.



UC9\_blood glucose

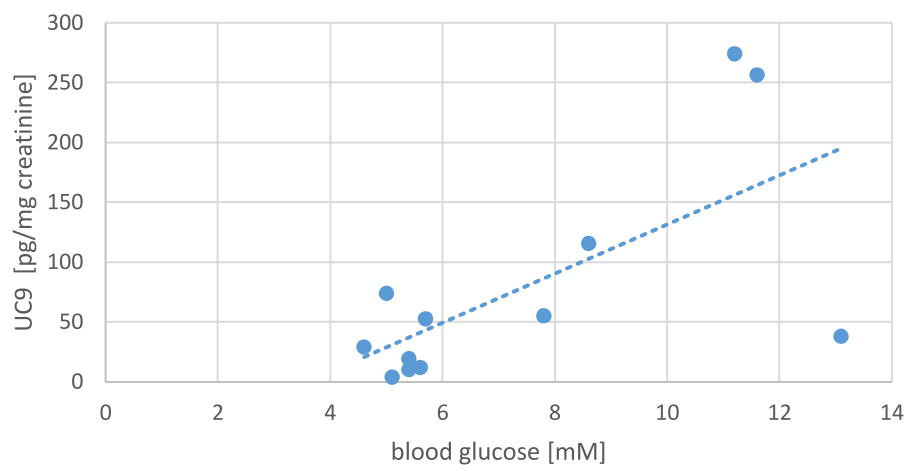


Table S13: Correlation of serum and urinary BM candidates with HbA1c and BMI

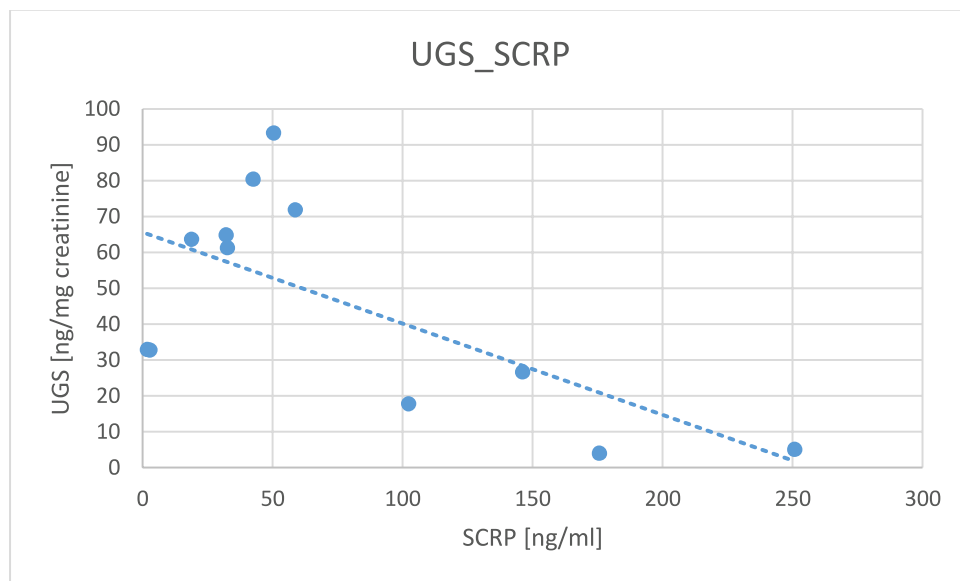
BM in→ ↓	HbA1c						BMI-z-score					
	Serum			Urine			Serum			Urine		
	Pearson	Spearman	n	Pearson	Spearman	n	Pearson	Spearman	n	Pearson	Spearman	n
ADP			1	-0.035 0.913	-0.077 0.812	12			1	0.145 0.671	0.318 0.340	11
a1AGP	0.084 0.818	-0.107 0.769	10	-0.126 0.696	-0.004 0.991	12	0.311 0.497	0.214 0.645	7	0.071 0.836	0.273 0.417	11
AGT			1	-0.284 0.371	-0.291 0.358	12			1	-0.159 0.640	0.036 0.915	11
ColXIII			1	0.264 0.460	0.138 0.705	10			1	0.339 0.412	0.619 0.102	8
GS			1	-0.275 0.388	-0.175 0.585	12			1	-0.018 0.959	0.018 0.958	11
LRGP1	-0.023 0.936	-0.167 0.552	15	0.112 0.730	0.152 0.637	12	0.262 0.388	0.374 0.209	13	-0.091 0.790	-0.050 0.884	11
HABP2			1	-0.308 0.330	-0.172 0.593	12			1	-0.330 0.321	-0.138 0.686	11
PICP	-0.191 0.682	-0.286 0.535	7	-0.202 0.509	-0.107 0.727	13	0.645 0.118	0.464 0.294	7	0.084 0.794	0.070 0.829	12
TGFβ	0.043 0.928	0.071 0.879	7	0.515 0.127	0.315 0.375	10	-0.521 0.231	-0.179 0.702	7	-0.095 0.807	-0.083 0.831	9
VTN	-0.285 0.396	-0.317 0.342	11	-0.287 0.366	-0.221 0.490	12	0.138 0.704	0.176 0.627	10	-0.066 0.847	0.155 0.650	11
C9	0.407 0.365	0.036 0.939	7	-0.306 0.334	-0.295 0.352	12	0.128 0.785	0.107 0.819	7	0.021 0.952	-0.036 0.915	11
C4BP			1	-0.040 0.901	0.014 0.965	12			1	0.269 0.424	0.300 0.370	11
CRP	0.503 <sup>a</sup> 0.047	0.251 0.348	16	0.156 0.612	0.165 0.589	13	0.133 0.650	0.095 0.748	14	0.422 0.172	0.245 0.443	12
FMN			3	0.010 0.977	0.205 0.544	11			3	-0.401 0.251	-0.164 0.651	10
CFH			1	-0.184 0.568	-0.228 0.476	12			1	0.095 0.781	0.218 0.519	11
CFI	0.252 0.585	0.036 0.939	7	-0.243 0.446	-0.255 0.424	12	-0.023 0.961	-0.143 0.760	7	0.117 0.731	0.339 0.307	11
FGG			0	-0.087 0.788	0.228 0.476	12			0	-0.090 0.793	-0.127 0.709	11

Table S14: Correlation of serum and urinary BM candidates with serum and urinary CRP

BM in→ ↓	SCRP						UCRP					
	Serum			Urine			Serum			Urine		
	Pearson	Spearman	n	Pearson	Spearman	n	Pearson	Spearman	n	Pearson	Spearman	n
ADP			1	0.318 0.314	0.538 0.071	12			1	0.152 0.621	0.319 0.289	13
a1AGP	-0.090 0.806	0.267 0.455	10	-0.021 0.949	-0.175 0.587	12	-0.436 0.280	-0.204 0.629	8	0.060 0.845	-0.011 0.972	13
AGT			1	-0.345 0.273	-0.315 0.319	12			1	-0.008 0.979	-0.066 0.831	13
ColXIII			1	-0.145 0.690	-0.067 0.854	10			1	-0.163 0.653	-0.274 0.444	10
GS			1	-0.655 <sup>a</sup> 0.021	-0.448 0.145	12			1	-0.285 0.345	-0.198 0.517	13
LRGP1	0.006 0.982	0.050 0.854	16	0.363 0.247	0.169 0.599	12			12	0.003 0.993	0.163 0.594	13
HABP2			1	-0.058 0.858	0.261 0.413	13	0.210 0.513	-0.042 0.897	1	-0.077 0.803	0.064 0.835	13
PICP	-0.578 0.174	-0.679 0.094	7	-0.204 0.503	-0.236 0.437	14	0.149 0.750	-0.143 0.760	7	0.042 0.888	-0.090 0.759	14
TGFβ	0.453 0.308	0.357 0.432	7	-0.312 0.380	-0.432 0.213	10	-0.225 0.627	-0.250 0.589	7	-0.057 0.869	-0.246 0.466	11
VTN	0.241 0.476	0.155 0.650	11	-0.417 0.178	-0.266 0.404	12	0.341 0.334	0.127 0.726	10	-0.197 0.520	-0.236 0.437	13
C9	0.585 0.168	0.357 0.432	7	-0.398 0.200	-0.462 0.131	12	0.317 0.489	0.464 0.294	7	-0.179 0.559	-0.352 0.239	13
C4BP			1	0.426 0.168	0.315 0.319	12			1	0.248 0.414	0.159 0.603	13
CRP	1.000	1.000	17	0.645 <sup>a</sup> 0.017	0.753 <sup>b</sup> 0.003	13	0.645 <sup>a</sup> 0.017	0.753 <sup>b</sup> 0.003	13	1.000	1.000	13
LUM			0			0			0			0
FMN			3	0.192 0.572	0.355 0.285	11			3	-0.128 0.693	0.161 0.618	12
CFH			1	-0.202 0.528	-0.413 0.183	12			1	0.101 0.742	-0.308 0.306	13
CFI	0.356 0.433	0.071 0.879	7	-0.255 0.423	-0.526 0.079	12	0.116 0.805	-0.107 0.819	7	0.084 0.785	-0.404 0.170	13
FGG			0	0.064 0.843	0.056 0.863	12			0	0.017 0.956	0.093 0.762	13
C1q			0			2			0			2

## Graphical visualization of correlations considered as significant:

Urinary gelsolin (GS) with serum CRP



Urinary CRP with serum CRP

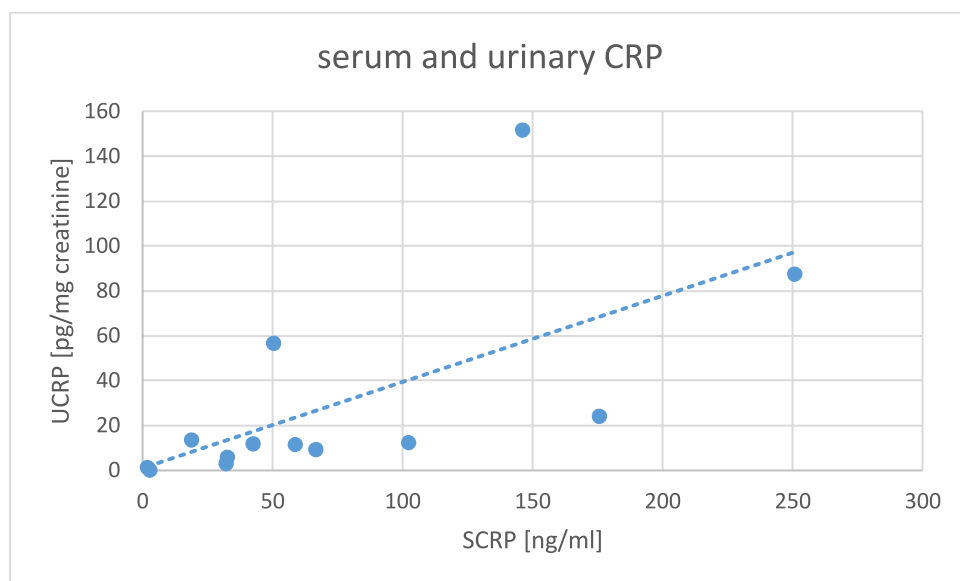


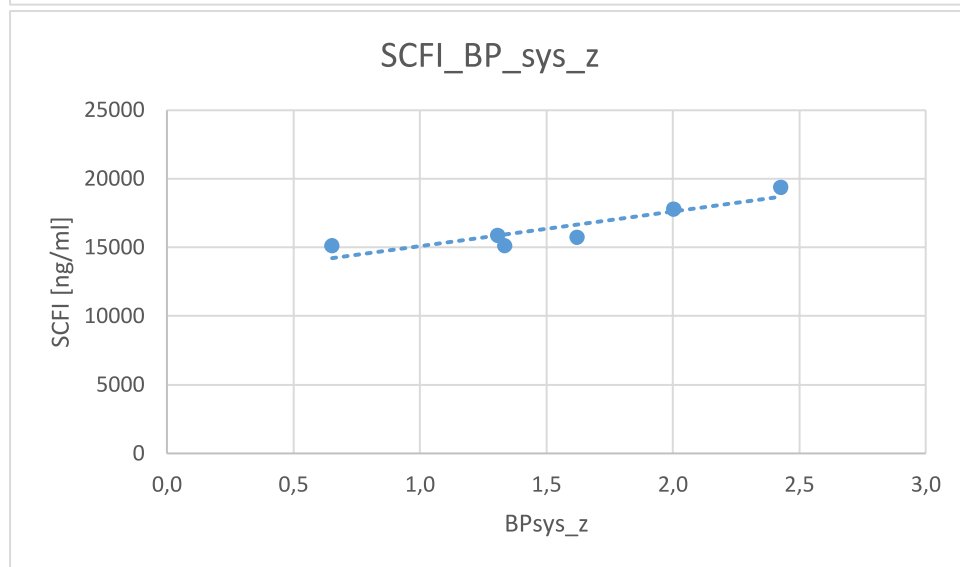
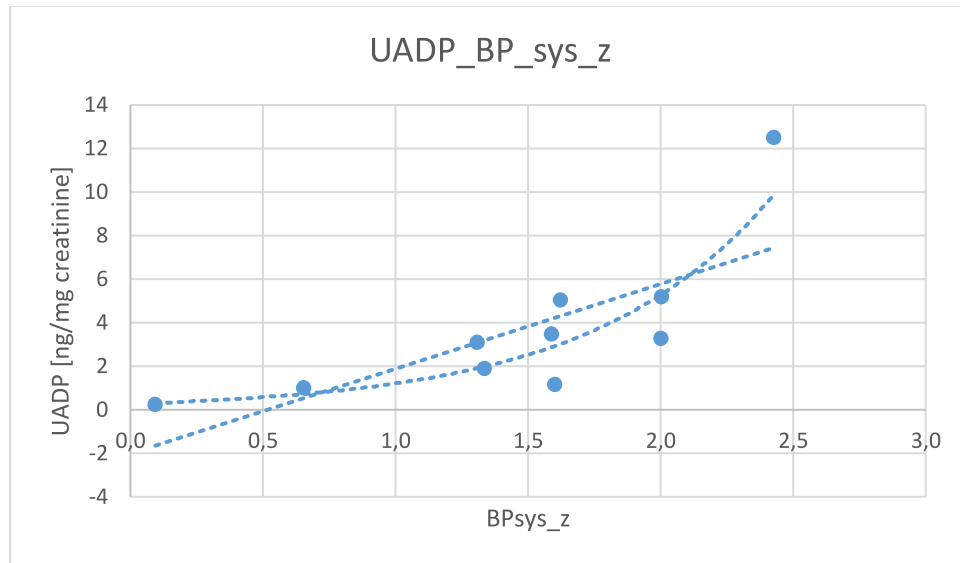


Table S15: Correlation of serum and urinary BM candidates with blood pressure (BP z-score)

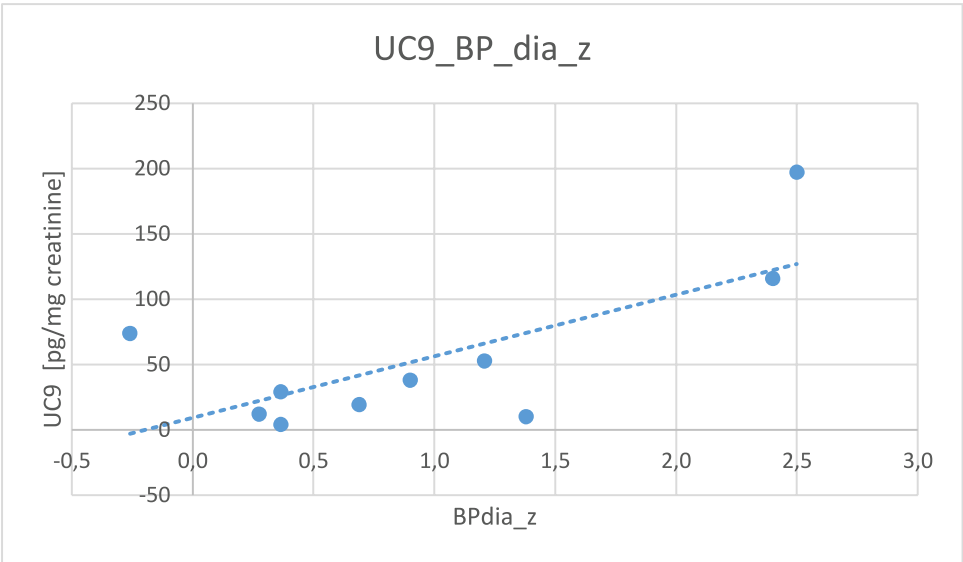
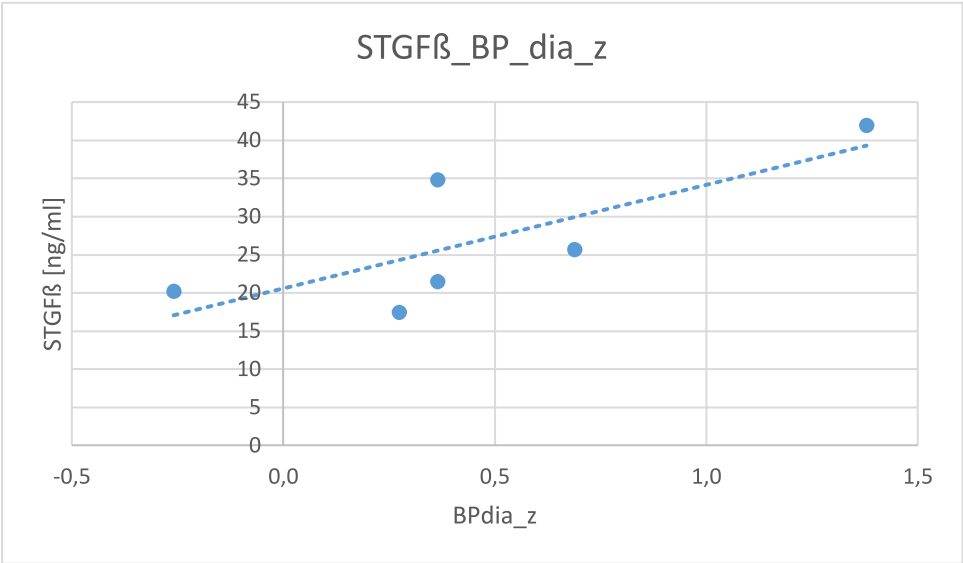
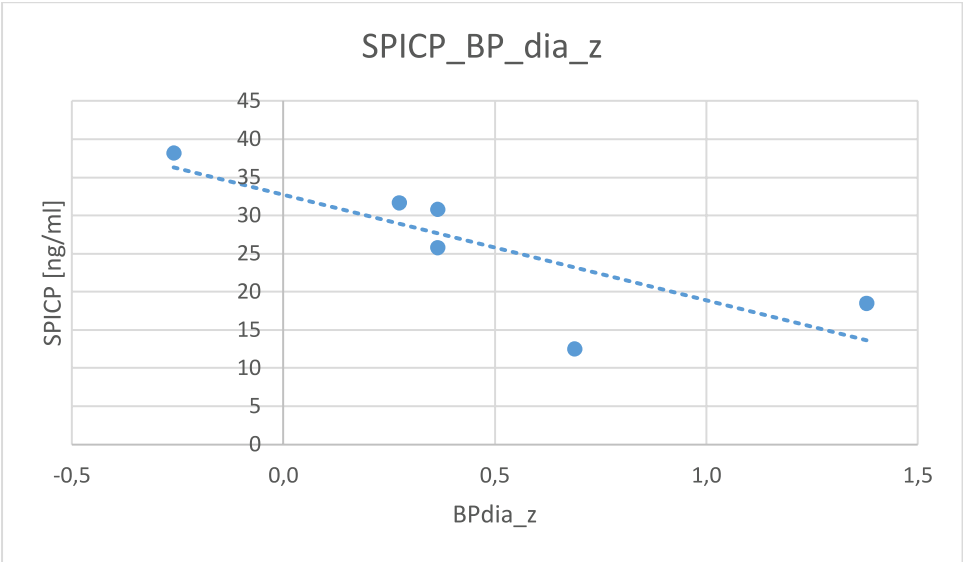
BM in→ ↓	BP_sys_z-score						BP_dia_z-score					
	Serum			Urine			Serum			Urine		
	Pearson	Spearman	n	Pearson	Spearman	n	Pearson	Spearman	n	Pearson	Spearman	n
ADP			1	0.753 <sup>a</sup> 0.012	0.867 <sup>b</sup> 0.001	10			1	-0.292 0.414	-0.383 0.275	10
a1AGP	0.353 0.492	0.543 0.266	6	0.537 0.110	0.285 0.425	10	-0.296 0.569	-0.143 0.787	6	-0.231 0.521	-0.103 0.776	10
AGT			1	0.339 0.338	0.261 0.467	10			1	0.098 0.787	0.073 0.841	10
ColXIII			1	0.328 0.473	0.500 0.253	7			1	0.433 0.332	0.179 0.702	7
GS			1	0.067 0.855	-0.067 0.855	10			1	0.573 0.084	0.480 0.160	10
LRGP1	-0.029 0.929	0.035 0.914	12	0.480 0.161	-0.170 0.638	10	-0.323 0.307	-0.434 0.158	12	-0.078 0.829	0.061 0.867	10
HABP2			1	-0.268 0.454	0.006 0.987	10			1	-0.021 0.955	-0.037 0.919	10
PICP	-0.177 0.737	-0.200 0.704	6	0.231 0.495	0.136 0.689	11	-0.796 0.058	-0.928 <sup>b</sup> 0.008	6	-0.301 0.369	-0.200 0.555	11
TGFβ	-0.658 0.155	-0.429 0.397	6	-0.287 0.491	-0.524 0.183	8	0.771 0.073	0.841 <sup>a</sup> 0.036	6	0.428 0.290	0.310 0.456	8
VTN	-0.321 0.400	-0.109 0.781	9	0.197 0.584	-0.006 0.987	10	-0.069 0.860	-0.059 0.881	9	0.536 0.110	0.207 0.567	10
C9	-0.492 0.321	-0.486 0.329	6	-0.005 0.990	-0.115 0.751	10	0.226 0.667	0.174 0.742	6	0.708 <sup>a</sup> 0.022	0.419 0.228	10
C4BP			1	0.305 0.392	0.309 0.385	10			1	0.317 0.373	0.103 0.776	10
CRP	0.445 0.128	0.591 <sup>a</sup> 0.033	13	0.241 0.476	0.318 0.340	11	-0.217 0.477	0.025 0.936	13	-0.362 0.274	-0.050 0.884	11
FMN			3	-0.028 0.940	-0.080 0.827	9			3	0.002 0.996	0.084 0.831	9
CFH			1	0.121 0.739	-0.152 0.676	10			1	0.355 0.314	0.298 0.403	10
CFI	0.899 <sup>a</sup> 0.015	0.714 0.111	6	-0.028 0.940	-0.080 0.827	10	-0.043 0.935	-0.203 0.700	6	-0.127 0.726	-0.074 0.839	10
FGG			0	0.593 0.071	0.333 0.347	10			0	0.304 0.393	0.480 0.160	10

### Graphical visualization of correlations considered as significant:

Urinary adiponectin (UADP) and serum complement factor I (SCFI) with systolic blood pressure.



Serum PICP, TGFβ, and urinary complement component 9 (UC9) with diastolic blood pressure.



# Supplementary Table S16 to S19

## Patients with T1DM (group B)

Table S16: Correlation of serum and urinary BM candidates with UACR and blood glucose

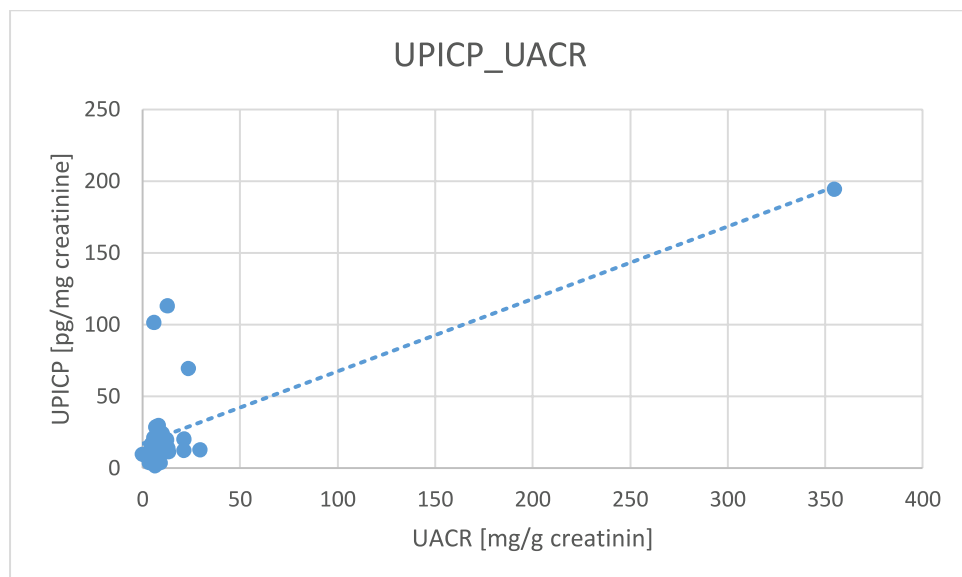
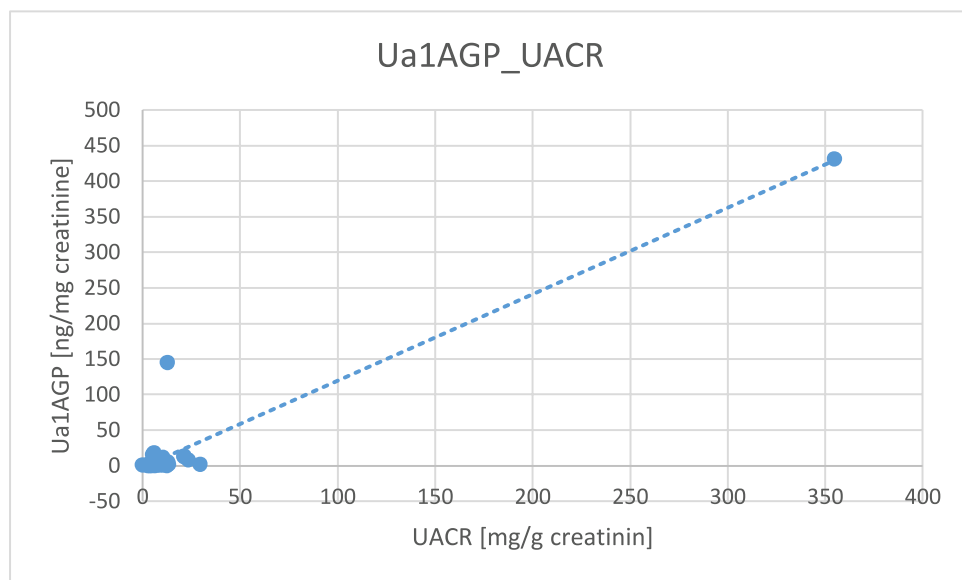
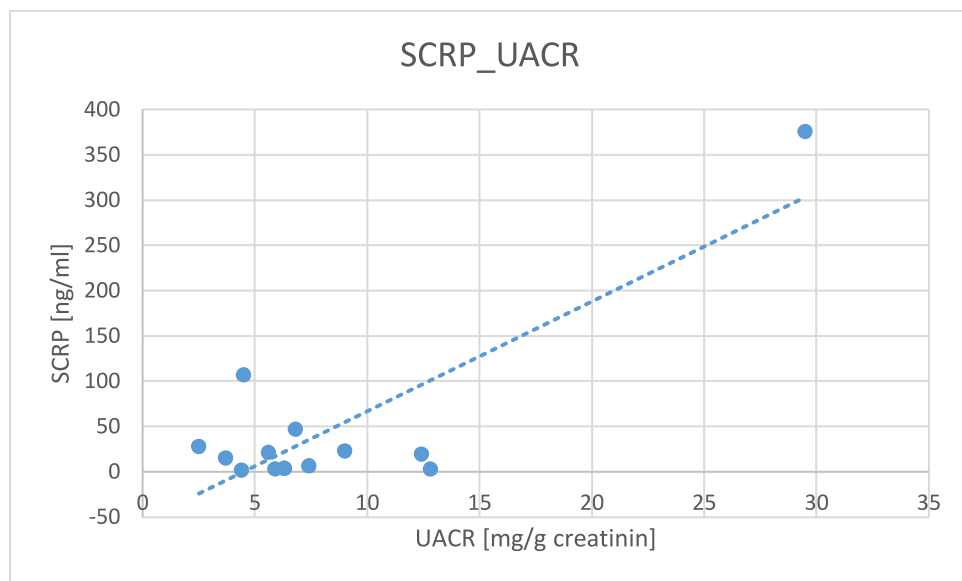
BM in→ ↓	UACR						blood glucose					
	Serum			Urine			Serum			Urine		
	Pearson	Spearman	n	Pearson	Spearman	n	Pearson	Spearman	n	Pearson	Spearman	n
ADP			0	0.035 0.853	0.064 0.733	31			0	0.034 0.837	0.167 0.304	40
a1AGP	0.058 0.845	0.096 0.744	14	0.947 <sup>b</sup> <0.001	.488 <sup>b</sup> 0.005	31	0.733 <sup>b</sup> 0.002	0.449 0.093	15	-0.069 0.671	0.091 0.578	40
AGT			0	-0.169 0.362	-0.308 0.092	31			0	0.064 0.695	-0.134 0.411	40
ColXIII			0	-0.063 0.736	0.083 0.655	31			0	-0.149 0.365	-0.201 0.219	39
GS			0	0.086 0.650	0.041 0.828	30			0	0.041 0.803	-0.025 0.882	39
LRGP1	-0.258 0.335	-0.519 <sup>a</sup> 0.039	16	-0.080 0.664	-0.245 0.177	32	0.123 0.617	0.604 <sup>b</sup> 0.006	19	0.059 0.714	-0.024 0.882	41
HABP2			0	0.054 0.777	0.167 0.377	30			0	0.198 0.228	0.010 0.950	39
PICP	-0.032 0.940	-0.144 0.734	8	0.778 <sup>b</sup> <0.001	0.495 <sup>b</sup> 0.005	31	-0.131 0.685	0.185 0.565	12	0.037 0.819	0.250 0.119	40
TGFβ	-0.138 0.745	-0.048 0.911	8	-0.254 0.183	-0.067 0.731	29	0.242 0.448	0.105 0.745	12	0.057 0.738	0.032 0.850	37
VTN	0.417 0.138	0.328 0.253	14	-0.099 0.590	-0.161 0.380	32	0.129 0.623	0.247 0.339	17	0.011 0.946	-0.023 0.886	41
C9	-0.166 0.722	-0.214 0.645	7	0.039 0.837	0.272 0.140	31	-0.362 0.304	-0.310 0.383	10	-0.038 0.818	0.183 0.258	40
C4BP			0	-0.027 0.887	0.129 0.489	31			0	-0.067 0.682	0.111 0.493	40
CRP	0.834 <sup>b</sup> <0.001	0.084 0.776	14	-0.019 0.920	0.189 0.309	31	-0.141 0.588	0.006 0.981	17	-0.084 0.607	0.164 0.312	40
FMN			0	-0.195 0.292	-0.295 0.108	31			2	-0.126 0.439	-0.148 0.363	40
CFH			0	-0.031 0.870	0.301 0.099	31			0	-0.042 0.799	0.053 0.744	40
CFI	-0.040 0.926	-0.476 0.233	8	-0.026 0.888	0.380 <sup>a</sup> 0.035	31	0.078 0.829	0.122 0.738	10	0.190 0.241	0.140 0.389	40
FGG			1	-0.104 0.577	-0.311 0.088	31			3	-0.028 0.864	0.006 0.971	40

Analyses were performed by SPSS (v.27). Each cell shows the correlation coefficient (upper figure) and a p-value (lower figure).

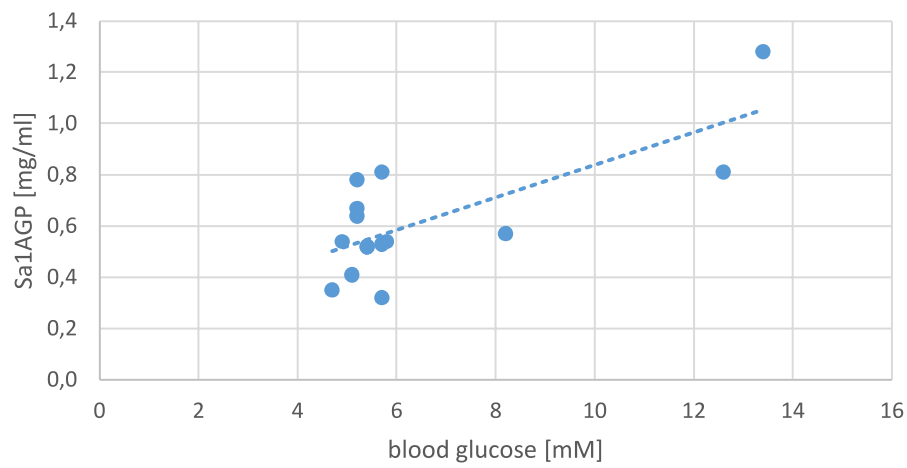
<sup>a</sup> and <sup>b</sup> indicate significant and highly significant correlations proposed by SPSS. Notwithstanding that, we set a correlation coefficient >0.500 moderately significant and >0.600 highly significant and mark these values by grey filling.

### Graphical visualization of correlations considered as significant:

Serum CRP, urinary (U) alpha1-acid glycoprotein (a1AGP), and PICP with UACR, as well as serum (S) a1AGP and leucine rich glycoprotein 1 (LRGP1) with blood glucose



Sa1AGP\_blood glucose



SLRGP1\_blood glucose

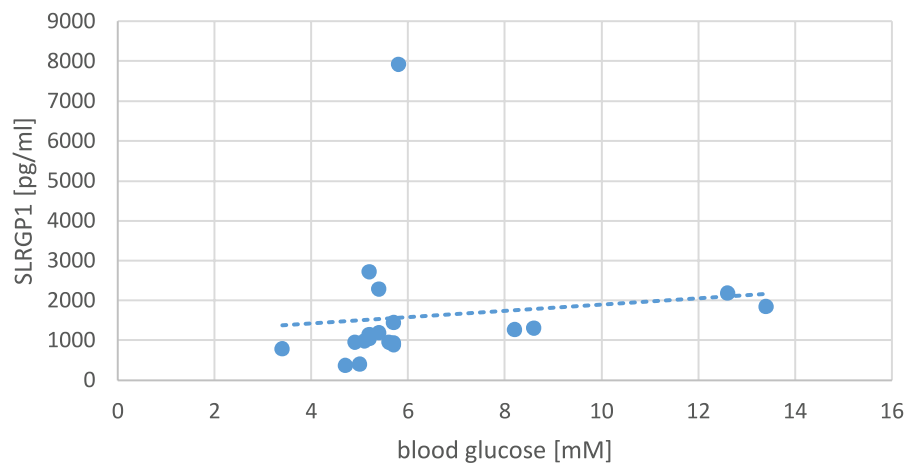


Table S17: Correlation of serum and urinary BM candidates with HbA1c and BMI z-scores.

BM in→ ↓	HbA1c						BMI-z-score					
	Serum			Urine			Serum			Urine		
	Pearson	Spearman	n	Pearson	Spearman	n	Pearson	Spearman	n	Pearson	Spearman	n
ADP			0	-0.040 0.805	0.081 0.621	40			0	0.147 0.385	0.014 0.935	37
a1AGP	-0.253 0.364	-0.309 0.262	15	0.013 0.938	-0.040 0.808	40	0.004 0.987	0.108 0.692	16	0.177 0.296	0.385 <sup>a</sup> 0.019	37
AGT			0	-0.338 <sup>a</sup> 0.033	-0.431 <sup>b</sup> 0.005	40			0	0.190 0.259	0.056 0.743	37
ColXIII			0	-0.056 0.734	0.002 0.990	39			0	0.260 0.126	0.224 0.189	36
GS			0	-0.359 <sup>a</sup> 0.025	-0.280 0.084	39			0	0.297 0.079	0.206 0.228	36
LRGP1	-0.278 0.249	-0.359 0.132	19	0.102 0.524	-0.015 0.928	41	-0.124 0.601	0.114 0.631	20	0.033 0.846	-0.063 0.708	38
HABP2			0	-0.095 0.566	-0.055 0.738	39			0	0.096 0.576	0.146 0.395	36
PICP	0.442 0.173	0.302 0.367	11	-0.110 0.500	-0.038 0.816	40	0.301 0.342	0.053 0.871	12	0.320 0.053	0.480 <sup>b</sup> 0.003	37
TGFβ	-0.094 0.783	-0.192 0.572	11	-0.101 0.554	-0.230 0.172	37	0.132 0.683	0.049 0.880	12	0.288 0.093	0.283 0.100	35
VTN	-0.188 0.470	-0.071 0.786	17	-0.431 <sup>b</sup> 0.005	-0.599 <sup>b</sup> <.001	41	0.301 0.225	0.187 0.458	18	0.324 <sup>a</sup> 0.048	0.282 0.087	38
C9	-0.241 0.502	-0.365 0.300	10	-0.268 0.095	-0.278 0.083	40	0.454 0.187	0.200 0.580	10	0.276 0.098	0.174 0.302	37
C4BP			0	-0.260 0.105	-0.113 0.489	40			0	0.229 0.173	0.048 0.776	37
CRP	0.074 0.777	0.421 0.092	17	-0.112 0.492	0.035 0.830	40	-0.089 0.726	-0.168 0.505	18	0.097 0.568	0.097 0.569	37
FMN			2	0.010 0.950	-0.147 0.367	40			2	-0.079 0.640	-0.102 0.548	37
CFH			0	-0.277 0.083	-0.022 0.894	40			0	0.248 0.139	0.237 0.157	37
CFI	0.000 1.000	-0.195 0.590	10	-0.219 0.175	-0.195 0.229	40	-0.349 0.324	-0.442 0.200	10	0.308 0.064	0.319 0.054	37
FGG			3	-0.224 0.164	-0.281 0.079	40			3	0.204 0.226	0.141 0.405	37

Table S18: Correlation of serum and urinary BM candidates with blood pressure z-scores.

BM in→ ↓	BP_sys_z-score						BP_dia_z-score					
	Serum			Urine			Serum			Urine		
	Pearson	Spearman	n	Pearson	Spearman	n	Pearson	Spearman	n	Pearson	Spearman	n
ADP			0	-0.387 <sup>a</sup> 0.022	-0.423 <sup>a</sup> 0.011	35			0	-0.189 0.278	-0.204 0.239	35
a1AGP	-0.257 0.375	-0.137 0.642	14	-0.069 0.694	0.074 0.673	35	0.005 0.986	0.066 0.822	14	0.009 0.958	0.133 0.445	35
AGT			0	0.071 0.684	0.096 0.585	35			0	-0.126 0.470	-0.086 0.624	35
ColXIII			0	0.203 0.249	0.083 0.643	34			0	-0.073 0.681	-0.043 0.810	34
GS			0	0.057 0.747	0.208 0.238	34			0	-0.109 0.540	-0.062 0.729	34
LRGP1	-0.008 0.973	0.356 0.147	18	0.209 0.221	-0.260 0.126	36	-0.417 0.085	0.124 0.624	18	0.184 0.282	-0.065 0.706	36
HABP2			0	-0.301 0.083	-0.338 0.051	34			0	-0.032 0.859	-0.040 0.824	34
PICP	-0.253 0.453	-0.068 0.842	11	-0.056 0.749	0.016 0.929	35	-0.282 0.401	-0.048 0.889	11	0.071 0.687	0.380 <sup>a</sup> 0.024	35
TGFβ	0.102 0.765	0.064 0.853	11	-0.044 0.810	0.016 0.928	33	0.196 0.563	0.114 0.739	11	-0.249 0.163	-0.246 0.168	33
VTN	0.196 0.468	0.100 0.713	16	0.137 0.427	0.216 0.205	36	0.285 0.285	0.272 0.308	16	-0.016 0.924	0.044 0.800	36
C9	0.646 0.060	0.467 0.205	9	0.054 0.757	0.042 0.809	35			9	0.095 0.586	0.082 0.641	35
C4BP			0	0.070 0.690	0.173 0.322	35			0	0.061 0.728	0.191 0.272	35
CRP	0.043 0.876	0.256 0.339	16	-0.057 0.747	0.050 0.773	35	-0.025 0.928	0.222 0.408	16	-0.007 0.969	0.142 0.417	35
FMN			2	0.315 0.065	0.210 0.225	35			2	0.021 0.904	-0.033 0.850	35
CFH			0	-0.059 0.734	0.052 0.767	35			0	-0.090 0.608	-0.034 0.848	35
CFI	-0.200 0.606	-0.117 0.765	9	-0.040 0.821	0.125 0.476	35	-0.256 0.505	-0.151 0.699	9	-0.022 0.902	0.096 0.585	35
FGG			2	0.246 0.155	0.284 0.099	35			2	-0.051 0.770	-0.035 0.843	35



**Table S19: Correlation of serum and urinary BM candidates with disease duration.**

BM in→ ↓	Disease duration [years]					
	Serum			Urine		
	Pearson	Spearman	n	Pearson	Spearman	n
<b>ADP</b>			0	-0.080 0.616	-0.161 0.308	42
<b>a1AGP</b>	-0.361 0.170	-0.178 0.509	16	-0.018 0.908	0.078 0.625	42
<b>AGT</b>			0	-0.073 0.646	0.011 0.943	42
<b>ColXIII</b>			0	0.005 0.976	0.046 0.776	41
<b>GS</b>			0	-0.088 0.585	-0.123 0.443	41
<b>LRGP1</b>	-0.166 0.485	-0.059 0.806	20	-0.143 0.361	-0.142 0.362	43
<b>HABP2</b>			0	0.172 0.282	0.088 0.586	41
<b>PICP</b>	-0.293 0.355	-0.364 0.245	12	0.006 0.971	-0.031 0.845	43
<b>TGFβ</b>	-0.242 0.449	-0.207 0.519	12	-0.292 0.071	-0.279 0.085	39
<b>VTN</b>	0.492 <sup>a</sup> 0.038	0.428 0.076	18	-0.025 0.872	0.001 0.997	43
<b>C9</b>	-0.226 0.504	-0.145 0.670	11	-0.060 0.707	-0.126 0.428	42
<b>C4BP</b>			0	-0.019 0.907	0.004 0.982	42
<b>CRP</b>	0.593 <sup>b</sup> 0.010	0.471 <sup>a</sup> 0.049	18	-0.033 0.834	0.257 0.093	44
<b>FMN</b>			2	-0.233 0.138	-0.181 0.251	42
<b>CFH</b>			0	-0.025 0.875	-0.176 0.264	42
<b>CFI</b>	-0.338 0.309	-0.487 0.128	11	-0.033 0.835	0.045 0.777	42
<b>FGG</b>			3	-0.054 0.732	-0.045 0.778	42

# Supplementary Tables S20 to S23

## Patients with nephropathies (groups A to G)

**Table S20: Correlation of serum and urinary BM candidates with serum creatinine and UACR**

BM in→ ↓	Serum creatinine						UACR					
	Serum			Urine			Serum			Urine		
	Pearson	Spearman	n	Pearson	Spearman	n	Pearson	Spearman	n	Pearson	Spearman	n
ADP	0.041	0.015	34	-0.065	-0.134	80	0.147	0.407 <sup>b</sup>	66	0.092	0.012	114
	0.819	0.932		0.567	0.237		0.240	<0.001		0.332	0.897	
a1AGP	-0.129	0.004	29	0.058	0.029	75	-0.032	0.214	49	0.199 <sup>a</sup>	0.583 <sup>b</sup>	109
	0.505	0.983		0.621	0.807		0.830	0.141		0.038	<0.001	
AGT	0.183	0.185	33	0.021	0.077	73	0.133	-0.158	65	0.115	0.342 <sup>b</sup>	107
	0.308	0.302		0.859	0.519		0.290	0.209		0.238	<0.001	
ColXIII	0.040	0.038	33	0.115	0.074	74	-0.025	0.150	65	0.279 <sup>b</sup>	0.353 <sup>b</sup>	108
	0.827	0.832		0.329	0.531		0.845	0.232		0.003	<0.001	
GS	-0.042	0.026	34	0.040	0.067	63	0.151	0.290 <sup>a</sup>	66	0.128	0.382 <sup>b</sup>	96
	0.815	0.884		0.756	0.604		0.225	0.018		0.214	<0.001	
LRGP1	0.136	0.060	66	-0.115	-0.108	80	-0.058	0.166	100	0.271 <sup>b</sup>	0.571 <sup>b</sup>	114
	0.275	0.631		0.310	0.338		0.565	0.100		0.004	<0.001	
HABP2	-0.126	-0.132	35	0.073	0.019	63	0.260 <sup>a</sup>	0.261 <sup>a</sup>	67	0.231 <sup>a</sup>	0.399 <sup>b</sup>	96
	0.470	0.450		0.570	0.881		0.034	0.033		0.023	<0.001	
PICP	-0.097	-0.060	51	0.001	0.066	86	-0.019	0.419 <sup>b</sup>	85	0.113	0.379 <sup>b</sup>	116
	0.499	0.674		0.993	0.547		0.866	<0.001		0.227	<0.001	
TGFβ	-0.231	-0.217	50	-0.116	-0.026	67	-0.039	0.281 <sup>a</sup>	81	0.023	0.171	102
	0.107	0.131		0.349	0.832		0.730	0.011		0.818	0.086	
VTN	0.108	0.102	61	-0.115	-0.055	77	-0.219 <sup>a</sup>	-0.335 <sup>b</sup>	94	0.052	0.255 <sup>b</sup>	111
	0.405	0.436		0.318	0.637		0.034	<0.001		0.586	0.007	
C9	-0.251	-0.118	17	0.014	-0.045	72	-0.006	0.198	53	0.202 <sup>a</sup>	0.491 <sup>b</sup>	106
	0.330	0.653		0.909	0.710		0.968	0.160		0.038	<0.001	
C4BP	-0.253	-0.112	33	0.035	0.074	76	-0.036	0.003	65	0.359 <sup>b</sup>	0.635 <sup>b</sup>	110
	0.155	0.534		0.764	0.523		0.776	0.982		<0.001	<0.001	
CRP	0.003	-0.152	82	-0.007	-0.065	86	-0.040	0.115	116	0.014	0.404 <sup>b</sup>	117
	0.977	0.172		0.946	0.550		0.668	0.218		0.878	<0.001	
LUM			1			1	0.188	0.090	22	0.680 <sup>b</sup>	0.580 <sup>b</sup>	22
							0.402	0.691		<0.001	0.005	
FMN	0.015	0.001	36	-0.003	-0.012	78	-0.068	0.058	66	0.242 <sup>a</sup>	0.425 <sup>b</sup>	107
	0.930	0.995		0.982	0.914		0.589	0.641		0.012	<0.001	
CFH	-0.092	-0.371	6	0.028	0.052	69	0.056	0.498 <sup>a</sup>	25	0.256 <sup>b</sup>	0.714 <sup>b</sup>	103
	0.863	0.468		0.817	0.671		0.792	0.011		0.009	<0.001	
CFI	-0.308	-0.261	17	0.116	0.112	71	0.330 <sup>a</sup>	0.464 <sup>b</sup>	38	0.208 <sup>a</sup>	0.588 <sup>b</sup>	105
	0.229	0.311		0.335	0.351		0.043	0.003		0.033	<0.001	
FGG	0.146	0.155	35	-0.099	-0.089	79	-0.093	-0.106	35	0.287 <sup>b</sup>	0.475 <sup>b</sup>	109
	0.403	0.374		0.385	0.436		0.596	0.545		0.002	<0.001	
C1q	-0.217	-0.162	36	-0.041	0.072	37	0.008	-0.097	68	-0.015	0.612 <sup>b</sup>	65
	0.203	0.344		0.810	0.671		0.950	0.432		0.907	<0.001	

Analyses were performed by SPSS (v.27). Each cell shows the correlation coefficient (upper figure) and a P-value (lower figure).

<sup>a</sup> and <sup>b</sup> indicate significant and highly significant correlations proposed by SPSS. Notwithstanding that, we set a correlation coefficient >0.500 moderately significant and >0.600 highly significant and mark these values by grey filling.

Graphical visualization of correlation considered as significant:

Urinary lumican (ULUM) with UACR

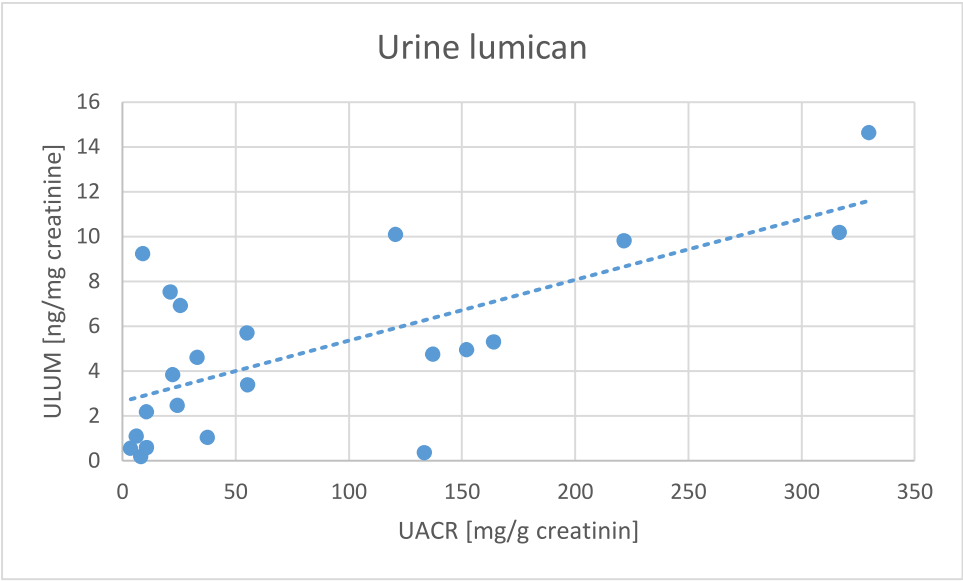


Table S21: Correlation of serum and urinary BM candidates with eGFR and cGFR.

BM in→ ↓	eGFR						cGFR					
	Serum			Urine			Serum			Urine		
	Pearson	Spearman	n	Pearson	Spearman	n	Pearson	Spearman	n	Pearson	Spearman	n
ADP	-0.014	-0.080	34	0.097	0.205	76	-0.136	-0.017	32	-0.034	0.038	76
	0.939	0.654		0.404	0.075		0.457	0.927		0.768	0.746	
a1AGP	0.553 <sup>b</sup>	0.371	25	-0.026	0.063	71	0.050	-0.139	29	-0.121	-0.062	72
	0.004	0.068		0.831	0.602		0.797	0.471		0.311	0.602	
AGT	-0.310	-0.230	33	-0.032	-0.030	69	0.339	0.111	31	-0.062	0.014	70
	0.079	0.198		0.792	0.805		0.062	0.553		0.608	0.908	
ColXIII	-0.207	-0.153	33	-0.077	0.010	70	-0.233	-0.275	31	-0.055	0.028	71
	0.248	0.395		0.525	0.937		0.207	0.134		0.651	0.818	
GS	0.086	0.015	34	0.025	0.098	59	-0.061	-0.108	32	-0.036	0.087	60
	0.631	0.932		0.852	0.460		0.739	0.557		0.786	0.509	
LRGP1	-0.038	-0.047	62	0.059	0.130	76	-0.218	-0.202	63	-0.020	-0.027	76
	0.768	0.714		0.615	0.264		0.086	0.112		0.861	0.815	
HABP2	0.149	0.109	35	-0.028	0.067	59	-0.330	-0.286	33	0.013	0.128	60
	0.393	0.532		0.831	0.612		0.061	0.107		0.923	0.330	
PICP	0.126	0.221	49	-0.009	-0.026	82	-0.141	-0.132	49	-0.009	0.001	82
	0.388	0.128		0.939	0.816		0.334	0.367		0.935	0.994	
TGFβ	0.218	0.104	48	0.032	-0.026	63	-0.074	-0.125	48	0.041	0.075	63
	0.137	0.480		0.804	0.840		0.617	0.398		0.751	0.557	
VTN	-0.084	-0.072	57	0.096	-0.015	73	0.207	0.080	58	0.038	-0.064	74
	0.536	0.596		0.421	0.897		0.120	0.548		0.749	0.590	
C9	-0.379	-0.415	16	-0.020	0.036	69	0.116	0.104	17	-0.062	0.059	69
	0.148	0.110		0.871	0.770		0.657	0.690		0.613	0.631	
C4BP	0.165	0.150	33	-0.001	-0.026	72	-0.184	-0.380 <sup>a</sup>	31	-0.039	-0.163	73
	0.359	0.403		0.992	0.831		0.323	0.035		0.741	0.167	
CRP	0.009	0.127	78	0.087	0.149	82	-0.060	-0.147	78	-0.033	-0.007	82
	0.936	0.268		0.439	0.182		0.601	0.199		0.771	0.953	
LUM			1			1			1			1
FMN	0.085	0.071	36	0.030	-0.017	74	-0.095	-0.096	34	-0.066	-0.076	74
	0.622	0.680		0.799	0.889		0.595	0.588		0.574	0.518	
CFH	0.240	0.829 <sup>a</sup>	6	-0.020	-0.025	65	-0.735	-0.771	6	-0.019	-0.065	66
	0.647	0.042		0.873	0.843		0.096	0.072		0.877	0.605	
CFI	0.260	-0.003	16	-0.048	-0.018	67	-0.369	-0.311	17	-0.079	-0.013	68
	0.330	0.991		0.701	0.887		0.145	0.224		0.523	0.914	
FGG	-0.067	-0.067	35	0.128	0.146	75	0.025	-0.075	33	0.078	-0.017	76
	0.702	0.703		0.274	0.211		0.891	0.677		0.505	0.883	
C1q	0.227	0.317	36	0.002	-0.033	37	-0.234	-0.260	34	-0.014	0.168	35
	0.184	0.060		0.990	0.844		0.182	0.137		0.937	0.336	

Graphical visualization of correlations considered as significant:

Serum complement factor H with eGFR and cGFR

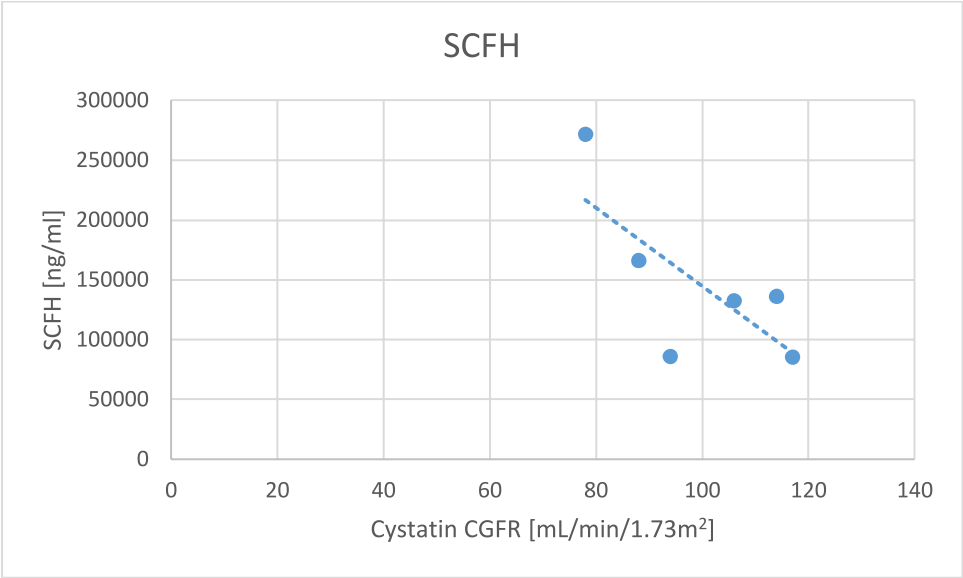
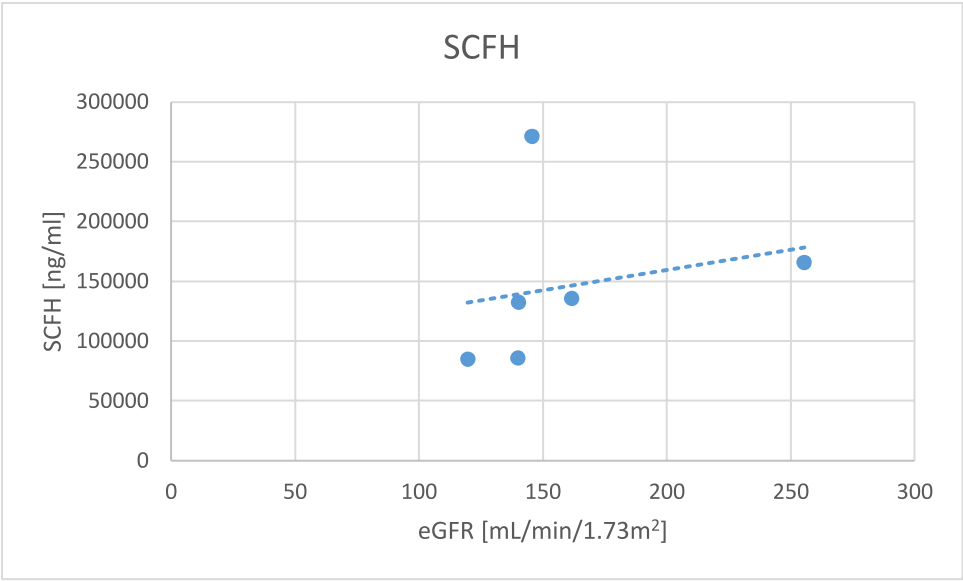


Table S22: Correlation of serum and urinary BM candidates with serum CRP

BM in→ ↓	SCRp					
	Serum			Urine		
	Pearson	Spearman	n	Pearson	Spearman	n
ADP	-0.082	-0.120	70	-0.086	-0.194 <sup>a</sup>	116
	0.501	0.322		0.359	0.037	
a1AGP	0.279 <sup>a</sup>	0.398 <sup>b</sup>	52	0.031	0.424 <sup>b</sup>	111
	0.045	0.003		0.746	<0.001	
AGT	-0.153	-0.086	69	-0.026	0.176	109
	0.209	0.482		0.785	0.068	
ColXIII	-0.039	0.233	69	0.380 <sup>b</sup>	0.493 <sup>b</sup>	110
	0.753	0.054		<0.001	<0.001	
GS	-0.071	0.146	70	0.007	0.216 <sup>a</sup>	98
	0.557	0.229		0.946	0.033	
LRGP1	0.072	0.298 <sup>b</sup>	106	0.360 <sup>b</sup>	0.561 <sup>b</sup>	116
	0.463	0.002		<0.001	<0.001	
HABP2	0.276 <sup>a</sup>	0.517 <sup>b</sup>	71	0.027	0.419 <sup>b</sup>	98
	0.020	<0.001		0.792	<0.001	
PICP	0.199	0.220 <sup>a</sup>	90	-0.095	-0.110	121
	0.060	0.037		0.301	0.229	
TGFβ	0.138	0.479 <sup>b</sup>	86	-0.025	-0.026	103
	0.206	<0.001		0.804	0.795	
VTN	-0.155	-0.116	100	-0.061	-0.005	113
	0.123	0.250		0.522	0.955	
C9	-0.067	0.286 <sup>a</sup>	54	-0.035	0.194 <sup>a</sup>	108
	0.631	0.036		0.717	0.045	
C4BP	0.140	0.328 <sup>b</sup>	69	0.087	0.573 <sup>b</sup>	112
	0.250	0.006		0.364	<0.001	
SCRp	1.000	1.000	122	0.532 <sup>b</sup>	0.612 <sup>b</sup>	177
				<0.001	<0.001	
LUM	0.365	0.311	23	0.009	0.557 <sup>b</sup>	23
	0.087	0.148		0.968	0.006	
FMN	-0.117	-0.070	70	0.124	0.499 <sup>b</sup>	112
	0.336	0.567		0.191	<0.001	
CFH	0.634 <sup>b</sup>	0.493 <sup>a</sup>	26	0.233 <sup>a</sup>	0.600 <sup>b</sup>	105
	<0.001	0.010		0.017	<0.001	
CFI	0.065	0.375 <sup>a</sup>	39	0.025	0.351 <sup>b</sup>	107
	0.696	0.019		0.802	<0.001	
FGG	-0.453 <sup>b</sup>	-0.152	37	0.223 <sup>a</sup>	0.514 <sup>b</sup>	112
	0.005	0.368		0.018	<0.001	
C1q	0.217	0.412 <sup>b</sup>	72	0.509 <sup>b</sup>	0.621 <sup>b</sup>	68
	0.068	<0.001		<0.001	<0.001	

# Graphical visualization of correlation considered as significant:

Serum complement factor H with serum CRP

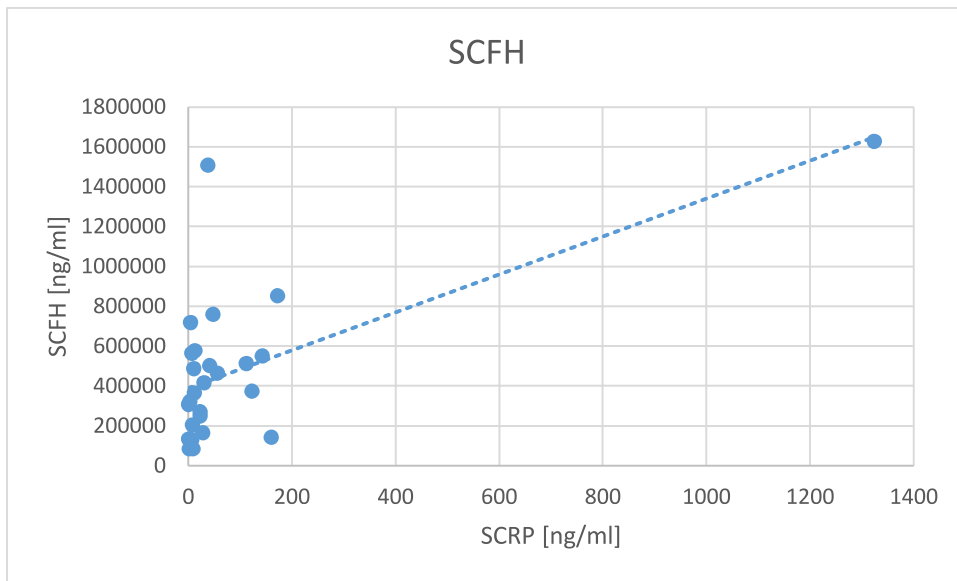


Table S23: Correlation of serum and urinary BM candidates with blood pressure (BP z-score)

BM in→ ↓	BP_sys_z-score						BP_dia_z-score					
	Serum			Urine			Serum			Urine		
	Pearson	Spearman	n	Pearson	Spearman	n	Pearson	Spearman	n	Pearson	Spearman	n
ADP	-0.054	-0.048	30	-0.204	-0.218	71	0.001	-0.007	30	-0.227	-0.163	71
	0.777	0.801		0.087	0.068		0.995	0.971		0.057	0.175	
a1AGP	-0.133	-0.167	25	-0.065	-0.156	68	-0.236	-0.235	25	0.074	-0.150	68
	0.525	0.424		0.599	0.205		0.256	0.258		0.546	0.222	
AGT	0.121	0.081	29	-0.026	0.028	66	0.187	0.218	29	-0.146	-0.072	66
	0.532	0.677		0.837	0.822		0.330	0.255		0.243	0.568	
ColXIII	0.120	0.136	29	0.128	-0.040	67	0.341	0.259	29	0.011	-0.019	67
	0.535	0.481		0.303	0.745		0.070	0.175		0.927	0.876	
GS	-0.024	0.014	30	-0.017	0.047	55	0.118	0.107	30	-0.159	-0.043	55
	0.899	0.943		0.902	0.733		0.535	0.575		0.247	0.758	
LRGP1	-0.119	0.005	59	-0.089	-0.209	71	-0.175	0.010	59	-0.038	-0.217	71
	0.371	0.969		0.462	0.080		0.186	0.938		0.752	0.069	
HABP2	-0.045	-0.085	31	-0.029	-0.034	55	0.027	0.060	31	-0.164	-0.145	55
	0.809	0.650		0.833	0.807		0.886	0.750		0.232	0.291	
PICP	-0.114	0.085	45	0.145	0.110	76	0.069	0.034	45	0.107	0.150	76
	0.458	0.577		0.210	0.346		0.653	0.822		0.356	0.195	
TGFβ	-0.217	-0.176	43	0.212	0.277	58	-0.089	-0.114	43	0.344	0.384	58
	0.163	0.259		0.110	0.035		0.568	0.466		0.008	0.003	
VTN	0.040	0.014	53	-0.117	-0.060	70	0.048	-0.007	53	0.023	-0.010	70
	0.777	0.921		0.335	0.623		0.732	0.960		0.849	0.932	
C9	-0.014	0.011	14	-0.163	-0.081	65	-0.111	-0.198	14	-0.132	-0.038	65
	0.961	0.970		0.195	0.523		0.705	0.497		0.296	0.761	
C4BP	-0.113	-0.237	29	-0.116	-0.123	69	-0.048	-0.128	29	-0.191	-0.117	69
	0.558	0.216		0.343	0.313		0.803	0.509		0.115	0.340	
CRP	0.087	-0.012	73	0.056	-0.118	76	-0.019	-0.187	73	-0.146	-0.353	76
	0.466	0.922		0.632	0.312		0.876	0.114		0.208	0.002	
FMN	0.095	0.119	32	-0.004	-0.162	69	-0.388	-0.160	32	-0.109	-0.149	69
	0.605	0.516		0.973	0.184		0.028	0.382		0.373	0.221	
CFH	0.179	0.300	5	-0.065	-0.019	62	-0.320	0.100	5	-0.165	0.092	62
	0.773	0.624		0.617	0.886		0.599	0.873		0.201	0.477	
CFI	-0.216	-0.332	14	0.010	0.052	64	-0.266	-0.387	14	-0.059	-0.004	64
	0.459	0.246		0.940	0.684		0.359	0.171		0.646	0.976	
FGG	0.216	0.251	31	0.026	-0.004	71	0.063	0.124	31	-0.031	-0.059	71
	0.244	0.173		0.828	0.975		0.738	0.507		0.799	0.627	
C1q	0.101	0.069	32	0.018	0.237	33	-0.057	-0.068	32	-0.291	-0.007	33
	0.581	0.706		0.921	0.183		0.755	0.711		0.100	0.967	



# Supplementary Tables S24 and S25: Analysis of sex differences of BM

**Table S24: Significance (P-values) of sex differences of urinary BM in various groups**

BM	control group		groups C to G		group A		group B	
	P-value	n (m/f)	P-value	n (m/f)	P-value	n (m/f)	P-value	n (m/f)
ADP	0.923	45/56	0.681	40/33	0.435	5/8	0.819	21/22
<b>a1AGP</b>	<b>0.021</b>	44/56	0.371	38/32	0.943	5/8	0.914	21/22
AGT	0.94	41/55	0.743	37/31	0.524	5/8	0.275	21/22
ColXIII	0.934	45/55	0.591	38/31	0.567	4/6	0.905	20/22
GS	0.915	43/56	0.742	29/28	0.284	5/8	0.22	21/21
LRGP1	0.522	45/56	0.582	40/33	0.752	5/8	0.52	21/22
HABP2	0.857	42/56	0.640	29/28	0.131	5/8	0.171	22/22
PICP	0.813	45/56	0.773	44/34	0.298	5/9	0.354	21/21
TGFβ	0.486	44/49	0.400	34/26	0.398	5/6	0.941	20/20
VTN	0.443	45/56	0.998	39/33	0.724	5/8	0.121	22/22
C9	0.834	43/56	0.227	36/31	0.943	5/8	0.801	21/22
<b>C4BP</b>	<b>0.010</b>	44/56	0.841	38/33	0.524	5/8	<b>0.018</b>	21/22
CRP	0.889	45/56	0.367	44/34	0.364	5/9	0.719	23/22
CFH	0.036	43/56	0.833	35/29	0.435	5/8	0.334	21/22
CFI	0.547	43/56	0.633	30/36	0.801	5/8	0.832	21/22
FMN	0.996	45/55	0.911	38/33	0.808	4/8	0.195	21/22
<b>FGG</b>	0.826	45/56	0.118	40/33	0.622	5/8	<b>0.011</b>	21/22
C1q	0.270	40/46	0.414	16/17				

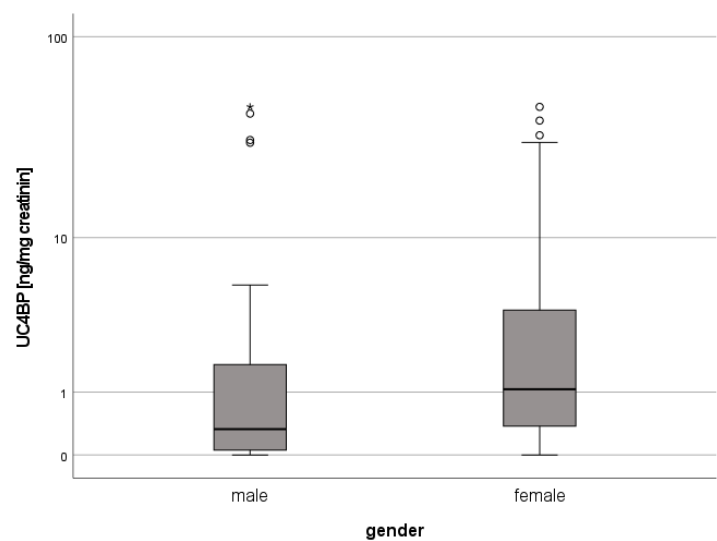
**Table S25: Significance (p-values) of sex differences of serum BM in various groups**

BM	control group		groups C to G		group A		group B	
	P-value	n (m/f)	P-value	n (m/f)	P-value	n (m/f)	P-value	n (m/f)
ADP	0.727	3/9	0.984	16/15				
a1AGP	0.902	6/11	0.848	15/11	0.135	5/5	0.905	7/10
AGT	0.482	3/9	0.240	16/14				
ColXIII	0.727	3/9	0.157	16/14				
GS	1.00	3/9	0.067	16/15				
LRGP1	0.978	9/16	0.685	33/28	0.492	6/10	0.918	10/11
HABP2	0.864	3/9	0.455	17/15				
PICP	0.539	5/15	0.849	22/24	0.629	3/ 4	0.034	6/7
TGFβ	0.497	5/15	0.788	20/24	0.400	3/4	0.445	6/7
VTN	0.925	8/15	0.205	28/27	0.792	5/6	0.243	10/9
C9	0.222	1/8	0.181	6/8	0.400	3/4	0.247	5/6
C4BP	0.282	3/9	0.667	16/14				
CRP	0.053	10/16	0.145	41/34	0.961	6/11	0.842	9/10
CFH	0.667	1/ 2	0.005	3/2				
CFI	0.667	2/7	0.800	7/7	0.400	3/4	0.537	5/6
FMN	1.00	4/9	0.620	16/17	0.667	1/2		
FGG	0.240	5/9	0.766	40/33				
C1q	0.630	3/8	0.576	15/17				

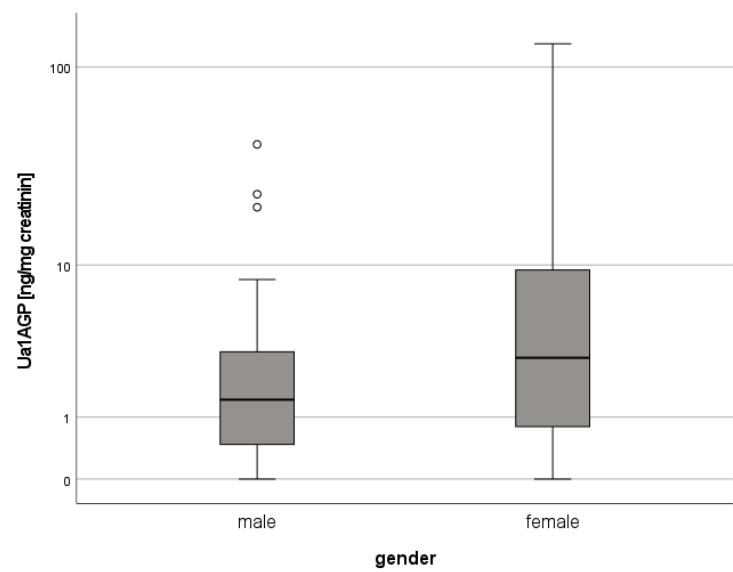
Analyses were performed by SPSS (v.27). m, males; f, females.

BMs that appear significantly different between males and females are indicated by bold letters and are shown graphically (see below). Empty cells: not enough values for analysis.

**Control group: urinary C4BP**



**Control group: urinary a1AGP**



T1DM, group B: urinary C4BP and FG

