SUPPLEMENTARY DATA

Supplementary Table 1: Correlations of LPS-related variables with components of the metabolic syndrome in non-diabetic control (NDC) subjects and patients with IgAGN. NDC_lean (BMI≤25 kg/m^2; n=219), NDC_ow (BMI>25 kg/m^2; n=126), NDC_all (NDC_lean + NDC_ow; n=345), and patients with IgAGN (n=98). Pearson's r-values are shown in each panel († p≤0.05, * p≤0.001).

A: Correlations between LPS/HDL-ratio and components of MetS.

	NDC_lean	NDC_ow	NDC_all	IgAGN
lnLPS/HDLvs. HOMA	0.05	0.155	**0.121†**	**0.230†**
lnLPS/HDL vs. Waist	0.129	**0.281†**	**0.250***	**0.402***
lnLPS/HDL vs. TG	**0.427***	**0.427***	**0.505***	**0.496***
lnLPS/HDL vs. insulin	**0.294***	**0.403***	**0.370***	**0.251†**
lnLPS/HDL vs. CRP	**0.272†**	**0.364***	**0.331***	0.175
lnLPS/HDL vs. BMI	0.053	**0.192†**	**0.199***	**0.343***

B: Correlations between LPS and components of MetS.

	NDC_lean	NDC_ow	NDC_all	IgAGN
lnLPS vs. HOMA	0.004	**0.199†**	0.092	**0.213†**
lnLPS vs. Waist	-0.080	0.151	0.051	0.051
lnLPS vs. TG	**0.320***	**0.512***	**0.396***	**0.325†**
lnLPS vs. insulin	**0.264***	**0.373***	**0.312***	**0.250†**
lnLPS vs. CRP	**0.118†**	**0.390***	**0.272***	0.135
lnLPS vs. BMI	-0.076	0.110	0.055	0.166
lnLPS vs. HDL	0.132	0.084	0.098	-0.063

C: Correlations between residual LPS and components of MetS.

	NDC_lean	NDC_ow	NDC_all	IgAGN
lnLPSres vs. HOMA	0.004	0.177	**0.118†**	0.161
lnLPSres vs. Waist	-0.019	0.154	0.073	0.076
lnLPSres vs. TG	**0.322***	**0.506***	**0.388***	**0.332†**
lnLPSres vs. insulin	**0.240***	**0.328***	**0.281***	0.200
lnLPSres vs. CRP	**0.239†**	**0.340***	**0.302***	0.114
lnLPSres vs. BMI	-0.054	0.133	0.061	0.192

To examine the influence of HDL on the MetS correlations, residuals from the linear regression of LPS and HDL were calculated. Residuals were then correlated to the components of MetS, to avoid the effect of HDL-cholesterol.

SUPPLEMENTARY DATA

Supplementary Table 2: Participating centers in the FinnDiane Collection.

The Finnish Diabetic Nephropathy Study Centers

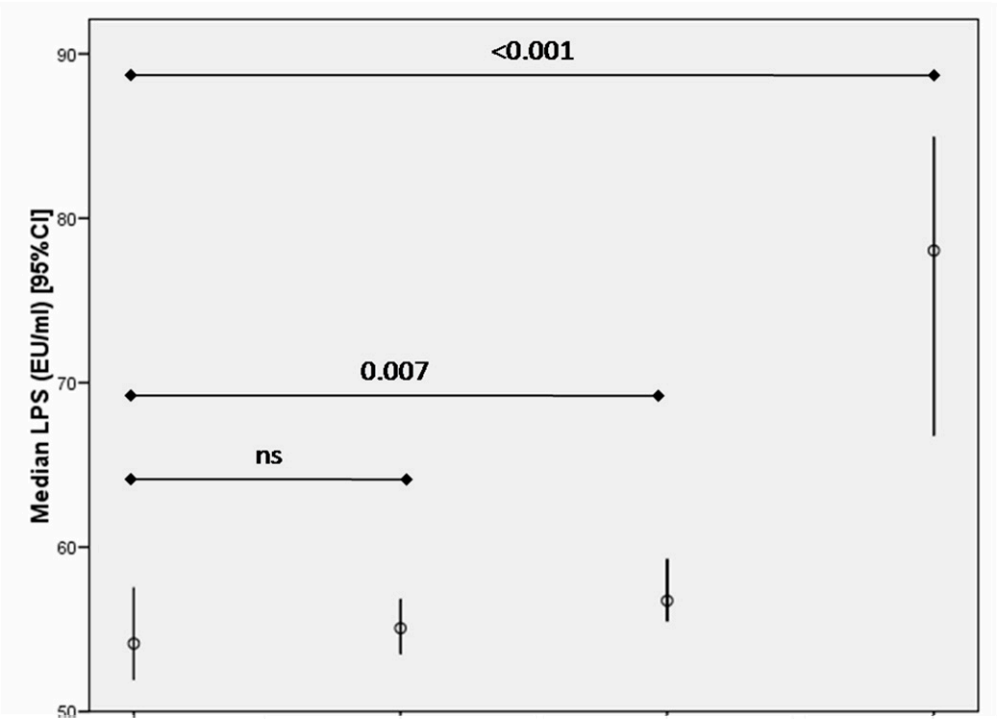
Anjalankoski Health Center	S.Koivula, T.Uggeldahl
Central Finland Central Hospital, Jyväskylä	T.Forslund, A.Halonen, A.Koistinen, P.Koskiaho,
	M.Laukkanen, J.Saltevo, M.Tiihonen
Central Hospital of Åland Islands, Mariehamn	M.Forsen, H.Granlund, A.-C.Jonsson, B.Nyroos
Central Hospital of Kanta-Häme, Hämeenlinna	P.Kinnunen, A.Orvola, T.Salonen, A.Vähänen
Central Hospital of Kymenlaakso, Kotka	R.Paldanius, M.Riihelä, L.Ryysy
Central Hospital of Länsi-Pohja, Kemi	H.Laukkanen, P.Nyländen, A.Sademies
Central Ostrobothnian Hospital District, Kokkola	S.Anderson, B.Asplund, U.Byskata, P.Liedes,
	M.Kuusela, T.Virkkala
City of Espoo Health Center:	
Espoonlahti	A.Nikkola, E.Ritola
Tapiola	M.Niska, H.Saarinen
Samaria	E.Oukko-Ruponen, T.Virtanen
Viherlaakso	A.Lyytinen
City of Helsinki Health Center:	
Puistola	H.Kari, T.Simonen
Suutarila	A.Kaprio, J.Kärkkäinen, B.Rantaeskola
Töölö	P.Kääriäinen, J.Haaga, A-L.Pietiläinen
City of Hyvinkää Health Center	S.Klemetti, T.Nyandoto, E.Rontu, S.Satuli-Autere
City of Vantaa Health Center:	
Korso	R.Toivonen, H.Virtanen
Länsimäki	R.Ahonen, M.Ivaska-Suomela, A.Jauhiainen
Martinlaakso	M.Laine, T.Pellonpää, R.Puranen
Myyrmäki	A.Airas, J.Laakso, K.Rautavaara
Rekola	M.Erola, E.Jatkola
Tikkurila	R.Lönnblad, A.Malm, J.Mäkelä, E.Rautamo
Heinola Health Center	P.Hentunen, J.Lagerstam
Helsinki University Central Hospital,	
Department of Medicine, Division of Nephrology	A.Ahola, M.Feodoroff, D.Gordin, O.Heikkilä, K.Hietala,L.Salovaara, J.Kytö, S.Lindh, K.Pettersson-Fernholm, A.Sandelin, L.Thorn, J.Tuomikangas, T.Vesisenaho, J.Wadén
Herttoniemi Hospital, Helsinki	V.Sipilä
Hospital of Lounais-Häme, Forssa	T.Kalliomäki, J.Koskelainen, R.Nikkanen, N.Savolainen, H.Sulonen, E.Valtonen
Iisalmi Hospital	E.Toivanen
Jokilaakso Hospital, Jämsä	A.Parta, I.Pirttiniemi
Jorvi Hospital, Helsinki University Central Hospital	S.Aranko, S.Ervasti, R.Kauppinen-Mäkelin, A.Kuusisto, T.Leppälä, K.Nikkilä, L.Pekkonen
Jyväskylä Health Center, Kyllö	K.Nuorva, M.Tiihonen
Kainuu Central Hospital, Kajaani	S.Jokelainen, P.Kemppainen, A-M.Mankinen, M.Sankari
Kerava Health Center	H.Stuckey, P.Suominen
Kirkkonummi Health Center	A.Lappalainen, M.Liimatainen, J.Santaholma
Kivelä Hospital, Helsinki	A.Aimolahti, E.Huovinen
Koskela Hospital, Helsinki	V.Ilkka, M.Lehtimäki
Kotka Health Center	E.Pälikkö-Kontinen, A.Vanhanen
Kouvola Health Center	E.Koskinen, T.Siitonen
Kuopio University Hospital	E.Huttunen, R.Ikäheimo, P.Karhapää, P.Kekäläinen, M.Laakso, T.Lakka, E.Lampainen, L.Moilanen, L.Niskanen, U.Tuovinen, I.Vauhkonen, E.Voutilainen
Kuusamo Health Center	T.Kääriäinen, E.Isopoussu

SUPPLEMENTARY DATA

Kuusankoski Hospital	E.Kilkki, I.Koskinen, L.Riihelä
Laakso Hospital, Helsinki	T.Meriläinen, P.Poukka, R.Savolainen, N.Uhlenius
Lahti City Hospital	A.Mäkelä, M.Tanner
Lapland Central Hospital, Rovaniemi	L.Hyvärinen, S.Severinkangas, T.Tulokas
Lappeenranta Health Center	P.Linkola, I.Pulli
Lohja Hospital	T.Granlund, M.Saari, T.Salonen
Länsi-Uusimaa Hospital, Tammisaari	I.-M.Jousmaa, J.Rinne
Loimaa Health Center	A.Mäkelä, P.Eloranta
Malmi Hospital, Helsinki	H.Lanki, S.Moilanen, M.Tilly-Kiesi
Mikkeli Central Hospital	A.Gynther, R.Manninen, P.Nironen, M.Salminen, T.Vänttinen
Mänttä Regional Hospital	I.Pirttiniemi, A-M.Hänninen
North Karelian Hospital, Joensuu	U-M.Henttula, P.Kekäläinen, M.Pietarinen, A.Rissanen, M.Voutilainen
Nurmijärvi Health Center	A.Burgos, K.Urtamo
Oulaskangas Hospital, Oulainen	E.Jokelainen, P.-L.Jylkkä, E.Kaarlela, J.Vuolaspuro
Oulu Health Center	L.Hiltunen, R.Häkkinen, S.Keinänen-Kiukaanniemi
Oulu University Hospital	R.Ikäheimo
Päijät-Häme Central Hospital	H.Haapamäki, A.Helanterä, S.Hämäläinen, V.Ilvesmäki, H.Miettinen
Palokka Health Center	P.Sopanen, L.Welling
Pieksämäki Hospital	V.Javtsenko, M.Tamminen
Pietarsaari Hospital	M-L.Holmbäck, B.Isomaa, L.Sarelin
Pori City Hospital	P.Ahonen, P.Merensalo, K.Sävelä
Porvoo Hospital	M.Kallio, B.Rask, S.Rämö
Raahe Hospital	A.Holma, M.Honkala, A.Tuomivaara, R.Vainionpää
Rauma Hospital	K.Laine, K.Saarinen, T.Salminen
Riihimäki Hospital	P.Aalto, E.Immonen, L.Juurinen
Salo Hospital	A.Alanko, J.Lapinleimu, P.Rautio, M.Virtanen
Satakunta Central Hospital, Pori	M.Asola, M.Juhola, P.Kunelius, M.-L.Lahdenmäki, P.Pääkkönen, M.Rautavirta
Savonlinna Central Hospital	T.Pulli, P.Sallinen, M.Taskinen, E.Tolvanen, H.Valtonen, A.Vartia
Seinäjoki Central Hospital	E.Korpi-Hyövälti, T.Latvala, E.Leijala
South Karelia Central Hospital, Lappeenranta	T.Ensala, E.Hussi, R.Härkönen, U.Nyholm, J.Toivanen
Tampere Health Center	A.Vaden, P.Alarotu, E.Kujansuu, H.Kirkkopelto-Jokinen, M.Helin, S.Gummerus, L.Calonius, T.Niskanen, T.Kaitala, T.Vatanen
Tampere University Hospital	I.Ala-Houhala, T.Kuningas, P.Lampinen, M.Määttä, H.Oksala, T.Oksanen, K.Salonen, H.Tauriainen, S.Tulokas
Tiirismaa Health Center, Hollola	T.Kivelä, L.Petlin, L.Savolainen
Turku Health Center	I.Hämäläinen, H.Virtamo, M.Vähätalo
Turku University Central Hospital	K.Breitholz, R.Eskola, K.Metsärinne, U.Pietilä, P.Saarinen, R.Tuominen, S.Äyräpää
Vaajakoski Health Center	K.Mäkinen, P.Sopanen
Valkeakoski Regional Hospital	S.Ojanen, E.Valtonen, H.Ylönen, M.Rautiainen, T.Immonen
Vammala Regional Hospital	I.Isomäki, R.Kroneld, M.Tapiolinna-Mäkelä
Vasa Central Hospital	S.Bergkulla, U.Hautamäki, V.-A.Myllyniemi, I.Rusk

SUPPLEMENTARY DATA

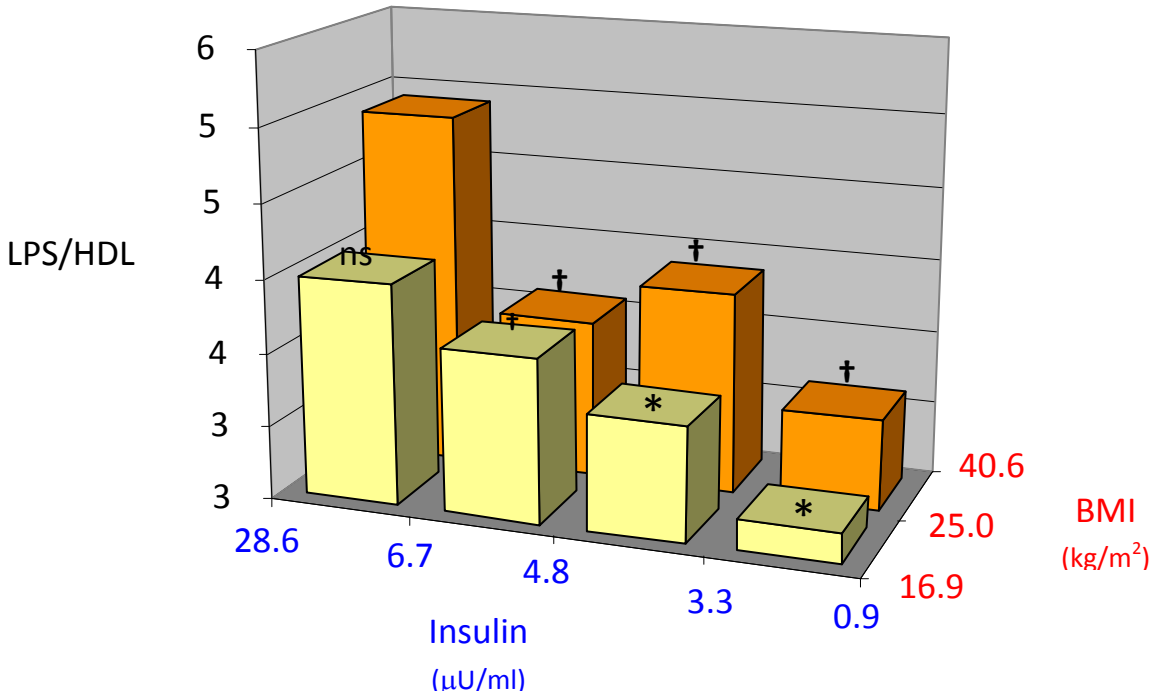
Supplementary Figure 1: Relationships between individual components of MetS and serum LPS-activity in type 1 diabetic patients with normal albumin excretion. Type 1 diabetic patients with normal AER (n=573) were divided into groups based on how many individual MetS criteria were fulfilled (scores 1-5): central obesity (waist circumference in men ≥94 cm and women ≥80 cm); triglycerides ≥1.7mmol/l; HDL-cholesterol in men <1.0 mmol/l and women <1.30 mmol/l; blood pressure (BP) ≥130/85 mmHg; and fasting glucose (GLUC) ≥6.11 mmol/l. All diabetic patients obtained one score for high blood glucose. Subjects, who had four or five scores were pooled into one group due to a low number of patients.



MetSCORE	1	2	3	4 or 5
N	102	227	185	59
LPS	54 (48-63)	55 (49-64)	57 (52-70)	78 (62-94)
BP (%)		65	90	98
Waist (%)		30	91	95
HDL (%)		3	10	71
Triglycerides (%)		2	8	56
Gluc (%)	100	100	100	100

SUPPLEMENTARY DATA

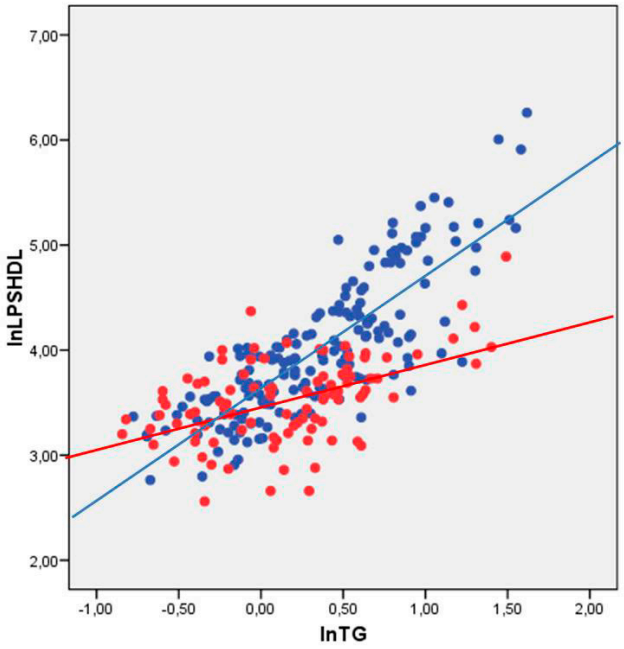
Supplementary Figure 2: Relationships between LPS/HDL-ratio, BMI and fasting insulin in non-diabetic control (NDC) subjects. Subjects in the NDC_all (n=345) were divided into eight groups based on BMI cut-off 25 kg/m^2 and quartiles of fasting insulin. Data shown as LPS/HDL median values (ns, non-significant, † p≤0.05, * p≤0.001).



SUPPLEMENTARY DATA

Supplementary Figure 2: Relationships between LPS/HDL-ratio and serum triglycerides in type 1 diabetic patients with macroalbuminuria and patients with IgAGN. A) Correlations between LPS/HDL-ratio and serum triglycerides. Type 1 diabetic patients with macroalbuminuria shown as blue circles (r=0.82; p<0.001) and patients with IgAGN shown as red circles (r=0.50; p<0.001). B) Type 1 diabetic patients with macroalbuminuria (blue) and patients with IgAGN (red) were divided in three groups according to serum triglyceride concentrations (<1.0, 1.0-1.7, >1.7 mmol/l). The number of patients is shown within the bars. Data shown as median and 95% CI (* p<0.001).

(A)



(B)