

Supplementary Table. 1 Correlation coefficients between DAS28-ESR and lipids in female patients with rheumatoid arthritis.

Lipid molecules	Positive correlation coefficients	<i>P</i> value	Lipid molecules	Negative correlation coefficients	<i>P</i> value
Cer(d42:2)1	0.32	<0.0001	FA(18:0)	-0.41	<0.0001
TG(60:8)2	0.29	<0.0001	FA(16:0)	-0.31	<0.0001
TG(58:7)	0.28	<0.0001	Bilirubin	-0.29	<0.0001
TG(58:8)	0.28	<0.0001	PC(38:6)1	-0.28	<0.0001
TG(62:12)2	0.27	<0.0001	PC(36:4)1	-0.24	0.0002
TG(56:8)2	0.26	<0.0001	LPC(18:2)	-0.21	0.0011
PI(40:6)	0.26	<0.0001			
GM3(d42:2)	0.25	0.0001			
PI(38:6)	0.25	0.0001			
TG(58:9)	0.25	0.0001			
SM(d42:3)	0.25	0.0001			
Cer(d42:3)	0.25	0.0002			
GM3(d34:1)	0.24	0.0002			
TG(54:8)	0.24	0.0003			
SM(d40:3)	0.24	0.0003			
TG(56:7) 2	0.23	0.0003			
CerG3(d42:2)	0.23	0.0004			
DG(40:7)	0.23	0.0004			
SM(d42:4)	0.23	0.0004			
CerG1(d34:1)	0.23	0.0004			
TG(60:9)	0.23	0.0004			
LPE(22:6)	0.23	0.0004			
TG(58:10)	0.23	0.0005			
TG(62:9)	0.22	0.0006			
TG(60:11)	0.22	0.0007			
ChE(16:1)	0.22	0.0007			
TG(60:7)	0.22	0.0007			
TG(58:11)2	0.22	0.0008			
TG(54:7)	0.22	0.0009			
SM(d41:3)	0.22	0.0010			
DG(38:6)2	0.22	0.0010			
SM(d41:2)1	0.21	0.0013			
TG(62:13)	0.21	0.0014			

DG(38:6)1	0.20	0.0020			
PE(38:6)	0.20	0.0020			
PI(38:5)2	0.20	0.0021			
PE(40:6)	0.20	0.0022			

Only lipids with an absolute correlation coefficient >0.2 are shown. *Cer*: ceramide, *CerG*: glycosylceramide,

ChE: cholesterol ester, *DG*: diacylglycerol, *FA(16:0)*: palmitic acid, *FA(18:0)*: stearic acid, *GM3*:

monosialodihexosylganglioside, *LPC*: lysophosphatidylcholine, *LPE*: lysophosphatidylethanolamine, *PC*:

phosphatidylcholine, *PE*: phosphatidylethanolamine, *PI*: phosphatidylinositol, *SM*: sphingomyelin, *TG*:

triacylglycerol.

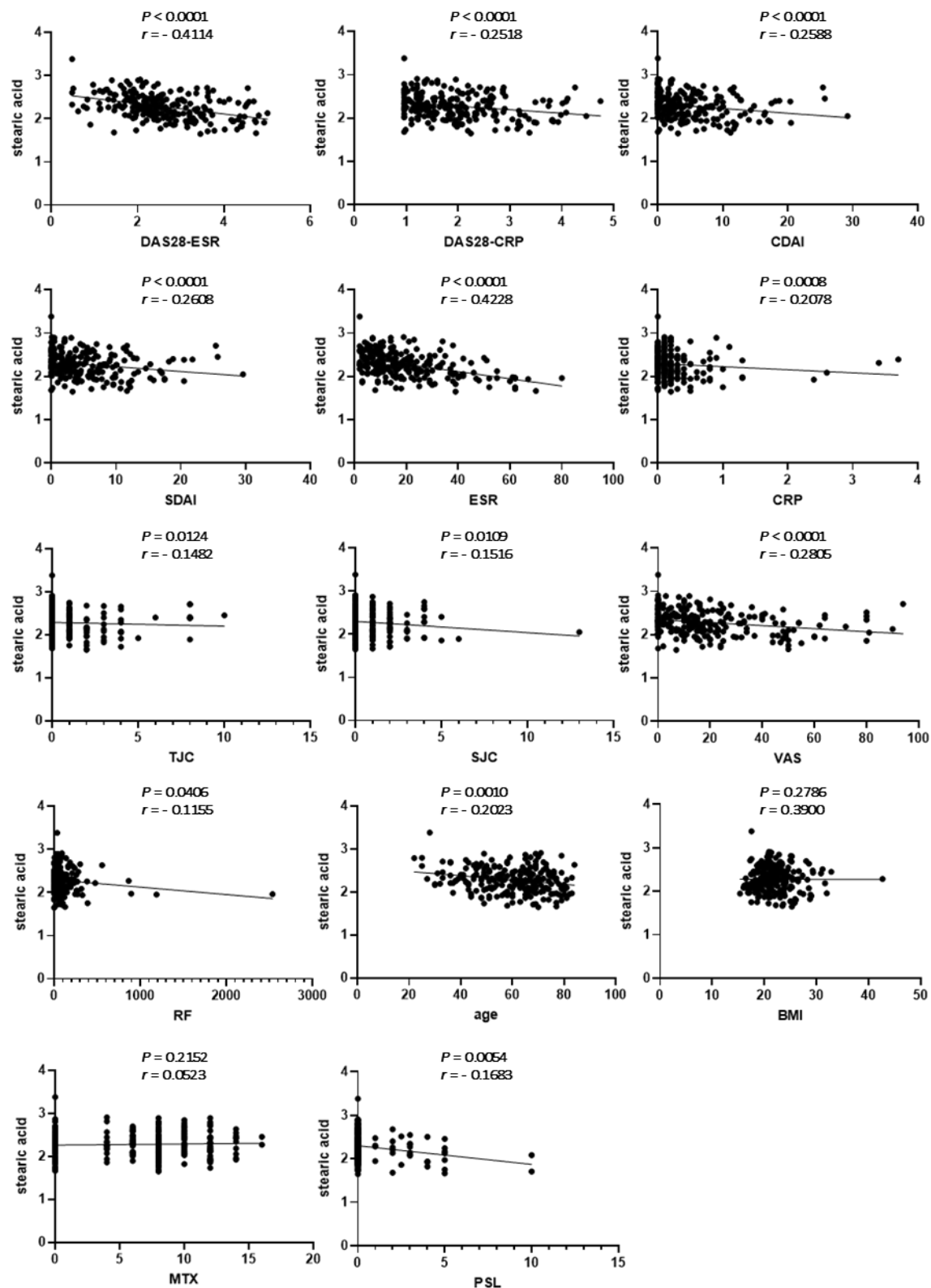
Supplementary Table 2. Correlation coefficients between DAS28-ESR and lipids in male patients with rheumatoid arthritis.

lipid molecules	negative correlation coefficients	<i>P</i> value
LPC(16:0)	-0.52	0.0001
FA(16:0)	-0.47	0.0007
PC(40:5)2	-0.46	0.0010
LPC(18:0)2	-0.45	0.0011
FA(18:0)	-0.45	0.0052
PC(38:5)1	-0.44	0.0015
PC(40:5)1	-0.44	0.0017
LPC(14:0)	-0.44	0.0017
LPC(22:6)	-0.42	0.0026
LPC(18:0)1	-0.39	0.0051
LPC(18:1)	-0.39	0.0052
PC(40:8)	-0.39	0.0058
PC(32:2)	-0.39	0.0062
LPC(16:1)	-0.38	0.0069
PC(38:7) 2	-0.38	0.0072
PC(36:6)	-0.37	0.0080
PI(40:5)	-0.37	0.0089
TG(60:6)	-0.37	0.0090
PC(30:0)	-0.36	0.0113
TG(60:7)	-0.35	0.0140
PI(38:4)	-0.35	0.0143
PC(34:4)	-0.35	0.0150
PC(34:0)	-0.34	0.0154
LPE(22:6)	-0.34	0.0171
PC(38:6)3	-0.34	0.0171
LPE(18:0)	-0.32	0.0249
TG(62:7)	-0.32	0.0268
LPC(18:2)	-0.31	0.0287
PE(38:7e)2	-0.31	0.0288
TG(62:9)	-0.31	0.0310
PC(38:7)1	-0.31	0.0315
DG(38:6)2	-0.30	0.0338
PE(38:6e)1	-0.30	0.0351

TG(50:7)	-0.30	0.0381
PC(40:7)	-0.30	0.0383
PC(40:4)	-0.29	0.0410
PC(38:6)2	-0.29	0.0443
TG(53:7)	-0.28	0.0479

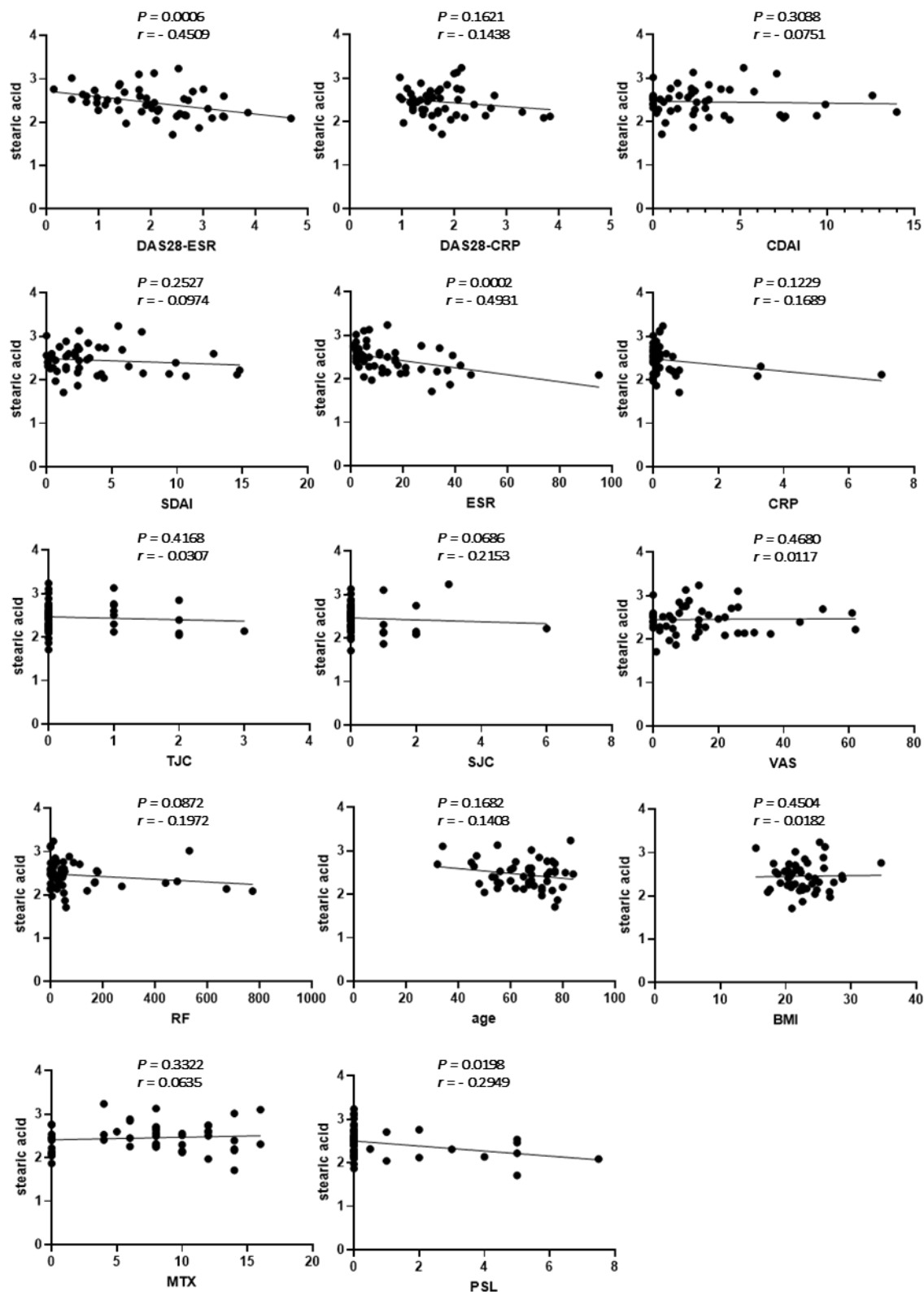
Only lipids with an absolute correlation coefficient >0.2 are shown. *DG*: diacylglycerol, *FA(16:0)*: palmitic acid, *FA(18:0)*: stearic acid, *LPC*: lysophosphatidylcholine, *LPE*: lysophosphatidylethanolamine, *PC*: phosphatidylcholine, *PE*: phosphatidylethanolamine, *PI*: phosphatidylinositol, *TG*: triacylglycerol.

Supplementary Figure 1.



Supplementary Figure 1. Scatter plots of stearic acid and clinical parameters in female patients. The y-axis shows the arbitrary unit of stearic acid, while the x-axis shows each clinical parameter. Correlation coefficients were analyzed by Pearson's correlation test. Abbreviations: CDAI: clinical disease activity index, CRP: C-reactive protein, DAS28: disease activity score in 28 joints, ESR: erythrocyte sedimentation rate, MTX: dose of methotrexate, PSL: dose of prednisolone, RF: rheumatoid factor, SDAI: simplified disease activity index, SJC: swollen joint count, TJC: tender joint count, VAS: global visual analog scale.

Supplementary Figure 2.



Supplementary Figure 2. Scatter plots of stearic acid and clinical parameters in male patients. The y-axis shows the arbitrary unit of stearic acid, while the x-axis shows each clinical parameter. Correlation coefficients were analyzed by Pearson's correlation test. Abbreviations: CDAI: clinical disease activity index, CRP: C-reactive protein, DAS28: disease activity score in 28 joints, ESR: erythrocyte sedimentation rate, MTX: dose of methotrexate, PSL: dose of prednisolone, RF: rheumatoid factor, SDAI: simplified disease activity index, SJC: swollen joint count, TJC: tender joint count, VAS: global visual analog scale.