

**Supplementary Table 1.** Univariable analysis between FVC and DLCO and baseline covariables, serum cytokines and biomarkers

	Age	Sex	Smoking	RA duration	DAS28-ESR	DAS28-CRP	PGA	HAQ-DI	RF titer	ACCP titer	TNF- $\alpha$	IL-6	MMP-7	SP-D	KL-6
<b>FVC</b>															
$r_s$	0.16	-0.028	0.123	-0.022	-0.209	-0.250	-0.148	-0.118	-0.057	0.078	-0.092	-0.257	-0.175	-0.290	-0.296
p-value	0.049	0.838	0.130	0.787	0.010	0.002	0.069	0.149	0.498	0.337	0.261	0.001	0.031	0.000	0.000
<b>DLCO</b>															
$r_s$	0.077	-0.187	0.063	-0.080	-0.176	-0.174	-0.122	-0.177	-0.050	0.010	-0.224	-0.201	-0.371	-0.287	-0.327
p-value	0.353	0.023	0.445	0.333	0.033	0.034	0.139	0.032	0.555	0.907	0.006	0.014	0.000	0.000	0.000

RA: rheumatoid arthritis, DAS28: disease activity score of 28 joints, ESR: erythrocyte sedimentation rate, CRP: C-reactive protein, PGA: patient global assessment, HAQ-DI: health assessment questionnaire-disability index, RF: rheumatoid factor, ACCP: anti-cyclic citrullinated peptide antibody, TNF- $\alpha$ : tumor necrosis factor  $\alpha$ , IL-6: interleukin 6, MMP-7: matrix metalloproteinase 7, SP-D: surfactant protein D, KL-6: Krebs von den Lungen 6, FVC: forced vital capacity, DLCO: diffusing capacity for carbon monoxide.

**Supplementary Table 2.** Univariable analysis between 6MWT and baseline covariables, serum cytokines and biomarkers

	Age	Sex	Smoking	RA duration	DAS28- ESR	DAS28- CRP	PGA	HAQ-DI	RF titer	ACCP titer	TNF- $\alpha$	IL-6	MMP-7	SP-D	KL-6	
6MWT																
$r_s$	-0.283	-0.172	0.095	-0.085	-0.200	-0.148	-0.179	-0.460	-0.038	-0.038	-0.023	-0.110	-0.153	0.085	0.012	
p-value	0.001	0.044	0.270	0.320	0.019	0.082	0.036	0.000	0.665	0.665	0.789	0.201	0.074	0.319	0.890	

RA: rheumatoid arthritis, DAS28: disease activity score of 28 joints, ESR: erythrocyte sedimentation rate, CRP: C-reactive protein, PGA: patient global assessment, HAQ-DI: health assessment questionnaire-disability index, RF: rheumatoid factor, ACCP: anti-cyclic citrullinated peptide antibody, TNF- $\alpha$ : tumor necrosis factor  $\alpha$ , IL-6: interleukin 6, MMP-7: matrix Metalloproteinase 7, SP-D: surfactant protein D, KL-6: Krebs von den Lungen 6, 6MWT: six minute walk test.