

Supplementary Material

Table S1. Correlations between serum biomarkers levels in IPF patients at baseline.

	KL-6 (U/mL)	SP-D (ng/mL)	CA19-9 (U/mL)	CA-125 (U/mL)	MMP-7 (ng/mL)	Periostin (ng/mL)	CCL18 (ng/mL)
KL-6 (U/mL)		$r = 0.49$ $p = 0.008$	$r = 0.20$ $p = 0.32$	$r = -0.18$ $p = 0.37$	$r = -0.01$ $p = 0.98$	$r = -0.03$ $p = 0.87$	$r = 0.44$ $p = 0.02$
SP-D (ng/mL)	$r = 0.49$ $p = 0.008$		$r = -0.03$ $p = 0.87$	$r = -0.52$ $p = 0.005$	$r = -0.01$ $p = 0.95$	$r = -0.15$ $p = 0.44$	$r = -0.02$ $p = 0.92$
CA19-9 (U/mL)	$r = 0.20$ $p = 0.32$	$r = -0.03$ $p = 0.87$		$r = 0.18$ $p = 0.35$	$r = 0.10$ $p = 0.60$	$r = -0.11$ $p = 0.57$	$r = 0.09$ $p = 0.65$
CA-125 (U/mL)	$r = -0.18$ $p = 0.37$	$r = -0.52$ $p = 0.005$	$r = 0.18$ $p = 0.35$		$r = 0.36$ $p = 0.06$	$r = 0.30$ $p = 0.12$	$r = 0.15$ $p = 0.44$
MMP-7 (ng/mL)	$r = -0.01$ $p = 0.98$	$r = -0.01$ $p = 0.95$	$r = 0.10$ $p = 0.60$	$r = 0.36$ $p = 0.06$		$r = 0.29$ $p = 0.14$	$r = -0.16$ $p = 0.41$
Periostin (ng/mL)	$r = -0.03$ $p = 0.87$	$r = -0.15$ $p = 0.44$	$r = -0.11$ $p = 0.57$	$r = 0.30$ $p = 0.12$	$r = 0.29$ $p = 0.14$		$r = 0.25$ $p = 0.20$
CCL18 (ng/mL)	$r = 0.44$ $p = 0.02$	$r = -0.02$ $p = 0.92$	$r = 0.09$ $p = 0.65$	$r = 0.15$ $p = 0.44$	$r = -0.16$ $p = 0.41$	$r = 0.25$ $p = 0.20$	

Abbreviations: KL-6 – Krebs von den Lungen-6, SP-D – surfactant protein D, CA19-9 – cancer antigen 19-9, CA-125 – cancer antigen 125, MMP-7 – matrix metalloproteinase 7, CCL18 – chemokine (C-C motif) ligand 18.

Table S2. Correlations between serum biomarkers levels in IPF patients after 6 months of antifibrotic therapy.

	KL-6 (U/mL)	SP-D (ng/mL)	CA19-9 (U/mL)	CA-125 (U/mL)	MMP-7 (ng/mL)	Periostin (ng/mL)	CCL18 (ng/mL)
KL-6 (U/mL)		$r = 0.46$ $p = 0.01$	$r = 0.17$ $p = 0.40$	$r = -0.05$ $p = 0.82$	$r = -0.15$ $p = 0.45$	$r = 0.08$ $p = 0.67$	$r = 0.08$ $p = 0.68$
SP-D (ng/mL)	$r = 0.46$ $p = 0.01$		$r = 0.05$ $p = 0.82$	$r = -0.53$ $p = 0.004$	$r = -0.08$ $p = 0.70$	$r = -0.11$ $p = 0.57$	$r = -0.24$ $p = 0.22$
CA19-9 (U/mL)	$r = 0.17$ $p = 0.40$	$r = 0.05$ $p = 0.82$		$r = 0.20$ $p = 0.31$	$r = 0.16$ $p = 0.42$	$r = 0.20$ $p = 0.31$	$r = -0.13$ $p = 0.52$
CA-125 (U/mL)	$r = -0.05$ $p = 0.82$	$r = -0.53$ $p = 0.004$	$r = 0.20$ $p = 0.31$		$r = 0.12$ $p = 0.55$	$r = -0.01$ $p = 0.95$	$r = 0.25$ $p = 0.19$
MMP-7 (ng/mL)	$r = -0.15$ $p = 0.50$	$r = -0.08$ $p = 0.70$	$r = 0.16$ $p = 0.42$	$r = 0.12$ $p = 0.55$		$r = 0.16$ $p = 0.41$	$r = -0.33$ $p = 0.09$
Periostin (ng/mL)	$r = 0.08$ $p = 0.67$	$r = -0.11$ $p = 0.57$	$r = 0.20$ $p = 0.31$	$r = -0.01$ $p = 0.95$	$r = 0.16$ $p = 0.41$		$r = 0.14$ $p = 0.47$
CCL18 (ng/mL)	$r = 0.08$ $p = 0.68$	$r = -0.24$ $p = 0.22$	$r = -0.13$ $p = 0.52$	$r = 0.25$ $p = 0.19$	$r = -0.33$ $p = 0.09$	$r = 0.14$ $p = 0.47$	

Abbreviations: KL-6 – Krebs von den Lungen-6, SP-D – surfactant protein D, CA19-9 – cancer antigen 19-9, CA-125 – cancer antigen 125, MMP-7 – matrix metalloproteinase 7, CCL18 – chemokine (C-C motif) ligand 18.

Table S3. Correlations between serum biomarkers levels in IPF patients after 12 months of antifibrotic therapy.

	KL-6 (U/mL)	SP-D (ng/mL)	CA19-9 (U/mL)	CA-125 (U/mL)	MMP-7 (ng/mL)	Periostin (ng/mL)	CCL18 (ng/mL)
KL-6 (U/mL)		$r = 0.33$ $p = 0.08$	$r = 0.08$ $p = 0.69$	$r = 0.14$ $p = 0.47$	$r = 0.12$ $p = 0.54$	$r = 0.22$ $p = 0.26$	$r = 0.23$ $p = 0.25$
SP-D (ng/mL)	$r = 0.33$ $p = 0.08$		$r = 0.01$ $p = 0.96$	$r = -0.45$ $p = 0.02$	$r = -0.22$ $p = 0.26$	$r = -0.06$ $p = 0.76$	$r = -0.31$ $p = 0.11$
	$r = 0.08$	$r = 0.01$		$r = 0.30$	$r = -0.05$	$r = -0.04$	$r = 0.20$

CA19-9 (U/mL)	$p = 0.69$	$p = 0.96$		$p = 0.12$	$p = 0.81$	$p = 0.86$	$p = 0.31$
CA-125 (U/mL)	$r = 0.14$ $p = 0.47$	$r = -0.45$ $p = 0.02$	$r = 0.30$ $p = 0.12$		$r = 0.33$ $p = 0.09$	$r = 0.15$ $p = 0.46$	$r = 0.45$ $p = 0.02$
MMP-7 (ng/mL)	$r = 0.12$ $p = 0.54$	$r = -0.22$ $p = 0.26$	$r = -0.05$ $p = 0.81$	$r = 0.33$ $p = 0.09$		$r = 0.31$ $p = 0.11$	$r = -0.05$ $p = 0.81$
Periostin (ng/mL)	$r = 0.22$ $p = 0.26$	$r = -0.06$ $p = 0.76$	$r = -0.04$ $p = 0.86$	$r = 0.15$ $p = 0.46$	$r = 0.31$ $p = 0.11$		$r = 0.02$ $p = 0.92$
CCL18 (ng/mL)	$r = 0.23$ $p = 0.25$	$r = -0.31$ $p = 0.11$	$r = 0.20$ $p = 0.31$	$r = 0.45$ $p = 0.02$	$r = -0.05$ $p = 0.81$	$r = 0.02$ $p = 0.92$	

Abbreviations: KL-6 – Krebs von den Lungen-6, SP-D – surfactant protein D, CA19-9 – cancer antigen 19-9, CA-125 – cancer antigen 125, MMP-7 – matrix metalloproteinase 7, CCL18 – chemokine (C-C motif) ligand 18.

Table S4. Correlations between serum biomarkers levels in IPF patients after 18 months of antifibrotic therapy.

	KL-6 (U/mL)	SP-D (ng/mL)	CA19-9 (U/mL)	CA-125 (U/mL)	MMP-7 (ng/mL)	Periostin (ng/mL)	CCL18 (ng/mL)
KL-6 (U/mL)		$r = 0.23$ $p = 0.23$	$r = 0.12$ $p = 0.53$	$r = 0.15$ $p = 0.46$	$r = 0.23$ $p = 0.24$	$r = 0.30$ $p = 0.13$	$r = 0.27$ $p = 0.16$
SP-D (ng/mL)	$r = 0.23$ $p = 0.23$		$r = -0.04$ $p = 0.84$	$r = -0.48$ $p = 0.01$	$r = 0.11$ $p = 0.58$	$r = -0.10$ $p = 0.61$	$r = -0.23$ $p = 0.25$
CA19-9 (U/mL)	$r = 0.12$ $p = 0.53$	$r = -0.04$ $p = 0.84$		$r = 0.23$ $p = 0.23$	$r = -0.02$ $p = 0.92$	$r = -0.03$ $p = 0.89$	$r = 0.002$ $p = 0.99$
CA-125 (U/mL)	$r = 0.15$ $p = 0.46$	$r = -0.48$ $p = 0.01$	$r = 0.23$ $p = 0.23$		$r = 0.21$ $p = 0.29$	$r = 0.04$ $p = 0.84$	$r = 0.10$ $p = 0.62$
MMP-7 (ng/mL)	$r = 0.23$ $p = 0.24$	$r = 0.11$ $p = 0.58$	$r = -0.02$ $p = 0.92$	$r = 0.21$ $p = 0.29$		$r = 0.22$ $p = 0.26$	$r = -0.41$ $p = 0.03$
Periostin (ng/mL)	$r = 0.30$ $p = 0.13$	$r = -0.10$ $p = 0.61$	$r = -0.03$ $p = 0.89$	$r = 0.04$ $p = 0.84$	$r = 0.22$ $p = 0.26$		$r = 0.19$ $p = 0.35$
CCL18 (ng/mL)	$r = 0.27$ $p = 0.16$	$r = -0.23$ $p = 0.25$	$r = 0.002$ $p = 0.99$	$r = 0.10$ $p = 0.62$	$r = -0.41$ $p = 0.03$	$r = 0.19$ $p = 0.35$	

Abbreviations: KL-6 – Krebs von den Lungen-6, SP-D – surfactant protein D, CA19-9 – cancer antigen 19-9, CA-125 – cancer antigen 125, MMP-7 – matrix metalloproteinase 7, CCL18 – chemokine (C-C motif) ligand 18.

Table S5. Correlations between serum biomarkers levels in IPF patients after 24 months of antifibrotic therapy.

	KL-6 (U/mL)	SP-D (ng/mL)	CA19-9 (U/mL)	CA-125 (U/mL)	MMP-7 (ng/mL)	Periostin (ng/mL)	CCL18 (ng/mL)
KL-6 (U/mL)		$r = 0.37$ $p = 0.06$	$r = 0.11$ $p = 0.57$	$r = 0.01$ $p = 0.95$	$r = 0.08$ $p = 0.70$	$r = 0.19$ $p = 0.33$	$r = 0.29$ $p = 0.13$
SP-D (ng/mL)	$r = 0.37$ $p = 0.06$		$r = 0.24$ $p = 0.23$	$r = -0.49$ $p = 0.008$	$r = -0.07$ $p = 0.74$	$r = 0.10$ $p = 0.61$	$r = -0.09$ $p = 0.65$
CA19-9 (U/mL)	$r = 0.11$ $p = 0.57$	$r = 0.24$ $p = 0.23$		$r = 0.11$ $p = 0.56$	$r = 0.05$ $p = 0.79$	$r = 0.06$ $p = 0.78$	$r = 0.13$ $p = 0.52$
CA-125 (U/mL)	$r = 0.01$ $p = 0.95$	$r = -0.49$ $p = 0.008$	$r = 0.11$ $p = 0.56$		$r = -0.06$ $p = 0.75$	$r = -0.01$ $p = 0.97$	$r = 0.35$ $p = 0.06$
MMP-7 (ng/mL)	$r = 0.08$ $p = 0.70$	$r = -0.07$ $p = 0.74$	$r = 0.05$ $p = 0.79$	$r = -0.06$ $p = 0.75$		$r = 0.13$ $p = 0.52$	$r = -0.23$ $p = 0.24$
Periostin (ng/mL)	$r = 0.19$ $p = 0.33$	$r = 0.10$ $p = 0.61$	$r = 0.06$ $p = 0.78$	$r = -0.01$ $p = 0.97$	$r = 0.13$ $p = 0.52$		$r = 0.09$ $p = 0.67$
CCL18 (ng/mL)	$r = 0.29$ $p = 0.13$	$r = -0.09$ $p = 0.65$	$r = 0.13$ $p = 0.52$	$r = 0.35$ $p = 0.06$	$r = -0.23$ $p = 0.24$	$r = 0.09$ $p = 0.67$	

Abbreviations: KL-6 – Krebs von den Lungen-6, SP-D – surfactant protein D, CA19-9 – cancer antigen 19-9, CA-125 – cancer antigen 125, MMP-7 – matrix metalloproteinase 7, CCL18 – chemokine (C-C motif) ligand 18

Table S6. Longitudinal changes in PFTs, 6MWT, and circulating biomarkers concentrations in patients with IPF.

	Baseline	6 months	12 months	18 months	24 months
FEV ₁ (l), mean (SD)	2.13 (0.60)	2.13 (0.54)	2.09 (0.56)	2.08 (0.55)	2.06 (0.56)
FEV ₁ % pred., mean (SD)	78.95 (19.04)	78.96 (17.82)	78.71 (18.27)	78.24 (18.57)	78.12 (18.97)
FVC (l), mean (SD)	2.65 (0.85)	2.67 (0.79)	2.59 (0.82)	2.58 (0.81)	2.56 (0.81)
FVC% pred., mean (SD)	74.95 (19.28)	75.25 (18.15)	74.16 (18.87)	74.03 (19.98)	73.78 (19.15)
FEV ₁ /FVC%, mean (SD)	81.53 (6.94)	80.92 (7.37)	82.10 (7.39)	82.31 (7.30)	83.84 (10.81)
T _{L,CO} (mmol/min/kPa), mean (SD)	3.98 (1.08)	3.83 (1.17)	3.37 (1.24) ****§§§	3.23 (1.24) ^^^^●●●	3.31 (1.14) #####±±
T _{L,CO} (% of predicted), mean (SD)	53.28 (12.78)	52.56 (15.28)	45.07 (15.82) ***§§	46.92 (20.08) ^	49.47 (19.67)
6MWT (meters), mean (SD)	396.30 (104.80)	416.20 (105.3)	374.70 (126.3)	381.90 (103.6)	346.00 (110.7) # ±±
KL-6 (U/mL), median (IQR)	1277 (727.8–1755)	1643 (714.80–2078)	1494 (875.30–2735)	1723 (970.30–2595)	1490 (798.80–2565)
SP-D (ng/mL), median (IQR)	366.70 (188.8–512.7)	353.30 (184.00–528.10)	365.60 (227.40–583.60)	343.50 (198.60–567.00)	369 (221.00–502.30)
MMP-7 (ng/mL), median (IQR)	8.55 (5.60–11.55)	6.80 (4.74–10.78)	9.65 (5.53–12.90)	8.40 (5.73–12.05)	10.80 (5.05–13.85)
CA19-9 (U/mL), median (IQR)	18.70 (8.70–25.50)	16.15 (9.25–26.78)	16.00 (10.38–25.00)	16.45 (12.35–25.18)	19.40 (12.85–31.05)
CA-125 (U/mL), median (IQR)	6.20 (2.88–9.15)	4.90 (2.73–8.50)	5.45 (2.15–11.80)	5.35 (2.50–11.90)	6.25 (2.70–12.40)
CCL18 (ng/mL), mean (SD)	304.70 (87.15)	313.9 (73.12)	315.9 (88.44)	310.8 (87.41)	310.5 (85.00)
Periostin (ng/mL), median (IQR)	9.85 (6.10–20.00)	10.25 (6.10–15.23)	10.05 (6.80–13.13)	10.30 (7.18–16.78)	9 (6.30–14.80)

Notes: Baseline vs 12 months, *** $p < 0.001$, **** $p < 0.0001$; Baseline vs 18 months, ^ $p < 0.05$, ^^^^ $p < 0.0001$; Baseline vs 24 months, # $p < 0.05$, ##### $p < 0.0001$; 6 months vs 12 months, §§ $p < 0.01$, §§§ $p < 0.001$; 6 months vs 18 months, ●●● $p < 0.0001$; 6 months vs 24 months, ±± $p < 0.01$. **Abbreviations:** IPF – idiopathic pulmonary fibrosis, FEV₁ – expiratory volume in 1 second, FVC – forced vital capacity, T_{L,CO} – transfer factor of the lung for carbon monoxide, 6MWT – six-minute walk test, KL-6 – Krebs von den Lungen-6, SP-D – surfactant protein D, MMP-7 – matrix metalloproteinase 7, CA19-9 – cancer antigen 19-9, CA-125 – cancer antigen 125, CCL18 – chemokine (C-C motif) ligand 18.

Table S7. Correlations of serum biomarkers levels with clinical measures in IPF patients at baseline.

	FVC % pred.	T _{L,CO} % pred.	Age (years)	Time since diagnosis (years)	Pack-years (years)	GAP index	CPI score	6MWT (meters)
KL-6 (U/mL)	$r = -0.67$ $p = 0.0001$	$r = -0.53$ $p = 0.004$	$r = -0.34$ $p = 0.07$	$r = 0.03$ $p = 0.89$	$r = 0.18$ $p = 0.36$	$r = 0.36$ $p = 0.06$	$r = 0.15$ $p = 0.44$	$r = -0.19$ $p = 0.34$
SP-D (ng/mL)	$r = -0.27$ $p = 0.16$	$r = -0.20$ $p = 0.30$	$r = -0.10$ $p = 0.60$	$r = -0.17$ $p = 0.38$	$r = 0.10$ $p = 0.62$	$r = 0.16$ $p = 0.41$	$r = -0.02$ $p = 0.91$	$r = 0.01$ $p = 0.97$
CA19-9 (U/mL)	$r = -0.09$ $p = 0.64$	$r = -0.34$ $p = 0.08$	$r = 0.06$ $p = 0.77$	$r = 0.45$ $p = 0.02$	$r = 0.15$ $p = 0.46$	$r = 0.33$ $p = 0.08$	$r = 0.31$ $p = 0.11$	$r = 0.23$ $p = 0.23$
CA-125 (U/mL)	$r = -0.06$ $p = 0.75$	$r = -0.14$ $p = 0.46$	$r = 0.04$ $p = 0.84$	$r = 0.12$ $p = 0.56$	$r = 0.08$ $p = 0.68$	$r = 0.10$ $p = 0.60$	$r = 0.24$ $p = 0.23$	$r = 0.03$ $p = 0.87$
MMP-7 (ng/mL)	$r = -0.21$ $p = 0.27$	$r = -0.13$ $p = 0.51$	$r = 0.10$ $p = 0.63$	$r = -0.09$ $p = 0.63$	$r = -0.11$ $p = 0.57$	$r = -0.05$ $p = 0.78$	$r = -0.13$ $p = 0.53$	$r = -0.27$ $p = 0.17$
Periostin (ng/mL)	$r = -0.21$ $p = 0.27$	$r = -0.17$ $p = 0.39$	$r = -0.27$ $p = 0.17$	$r = -0.22$ $p = 0.26$	$r = 0.04$ $p = 0.83$	$r = 0.07$ $p = 0.74$	$r = -0.03$ $p = 0.87$	$r = -0.07$ $p = 0.73$
CCL18 (ng/mL)	$r = -0.17$ $p = 0.38$	$r = -0.38$ $p = 0.04$	$r = -0.12$ $p = 0.55$	$r = -0.18$ $p = 0.35$	$r = 0.20$ $p = 0.30$	$r = 0.31$ $p = 0.11$	$r = 0.44$ $p = 0.02$	$r = -0.08$ $p = 0.68$

Abbreviations: IPF – idiopathic pulmonary fibrosis, FVC – forced vital capacity, T_{L,CO} – transfer factor of the lung for carbon monoxide, 6MWT – six-minute walk test, KL-6 – Krebs von den Lungen-6, SP-D – surfactant protein D, CA19-9 – cancer

antigen 19-9, CA-125 – cancer antigen 125, MMP-7 – matrix metalloproteinase 7, CCL18 – chemokine (C-C motif) ligand 18.

Table S8. Correlations of serum biomarkers levels with clinical measures in IPF patients after 6 months of antifibrotic therapy.

	FVC % pred.	T _{L,CO} % pred.	Age (years)	Time since diagnosis (years)	Pack-years (years)	GAP index	CPI score	6MWT (meters)
KL-6 (U/mL)	r = -0.57 p = 0.002	r = -0.46 p = 0.02	r = -0.40 p = 0.03	r = -0.08 p = 0.67	r = 0.11 p = 0.59	r = 0.16 p = 0.43	r = 0.23 p = 0.23	r = -0.21 p = 0.34
SP-D (ng/mL)	r = -0.25 p = 0.19	r = -0.15 p = 0.45	r = -0.12 p = 0.53	r = -0.16 p = 0.42	r = 0.08 p = 0.69	r = 0.12 p = 0.53	r = -0.19 p = 0.33	r = 0.04 p = 0.85
CA19-9 (U/mL)	r = 0.02 p = 0.94	r = -0.39 p = 0.04	r = 0.05 p = 0.80	r = 0.39 p = 0.04	r = 0.14 p = 0.49	r = 0.23 p = 0.24	r = 0.41 p = 0.03	r = 0.32 p = 0.14
CA-125 (U/mL)	r = -0.07 p = 0.74	r = -0.34 p = 0.09	r = 0.14 p = 0.48	r = 0.23 p = 0.23	r = 0.06 p = 0.78	r = 0.26 p = 0.18	r = 0.50 p = 0.007	r = -0.29 p = 0.18
MMP-7 (ng/mL)	r = -0.08 p = 0.70	r = -0.06 p = 0.76	r = 0.05 p = 0.80	r = 0.14 p = 0.47	r = -0.15 p = 0.45	r = 0.05 p = 0.81	r = -0.02 p = 0.92	r = 0.01 p = 0.98
Periostin (ng/mL)	r = -0.15 p = 0.44	r = -0.31 p = 0.12	r = -0.33 p = 0.09	r = 0.09 p = 0.65	r = 0.002 p = 0.99	r = 0.29 p = 0.14	r = 0.18 p = 0.35	r = 0.14 p = 0.51
CCL18 (ng/mL)	r = -0.16 p = 0.40	r = -0.30 p = 0.13	r = -0.22 p = 0.27	r = 0.01 p = 0.97	r = 0.33 p = 0.09	r = 0.20 p = 0.31	r = 0.45 p = 0.02	r = -0.20 p = 0.36

Abbreviations: IPF – idiopathic pulmonary fibrosis, FVC – forced vital capacity, T_{L,CO} – transfer factor of the lung for carbon monoxide, 6MWT – six-minute walk test, KL-6 – Krebs von den Lungen-6, SP-D – surfactant protein D, CA19-9 – cancer antigen 19-9, CA-125 – cancer antigen 125, MMP-7 – matrix metalloproteinase 7, CCL18 – chemokine (C-C motif) ligand 18.

Table S9. Correlations of serum biomarkers levels with clinical measures in IPF patients after 12 months of antifibrotic therapy.

	FVC % pred.	T _{L,CO} % pred.	Age (years)	Time since diagnosis (years)	Pack-years (years)	GAP index	CPI score	6MWT (meters)
KL-6 (U/mL)	r = -0.60 p = 0.0008	r = -0.48 p = 0.0098	r = -0.25 p = 0.19	r = -0.01 p = 0.96	r = 0.10 p = 0.61	r = 0.33 p = 0.09	r = 0.27 p = 0.17	r = -0.36 p = 0.06
SP-D (ng/mL)	r = -0.33 p = 0.09	r = -0.29 p = 0.14	r = -0.10 p = 0.60	r = -0.09 p = 0.66	r = 0.13 p = 0.49	r = 0.27 p = 0.17	r = 0.11 p = 0.58	r = -0.23 p = 0.24
CA19-9 (U/mL)	r = 0.01 p = 0.95	r = -0.37 p = 0.05	r = 0.09 p = 0.65	r = 0.36 p = 0.06	r = 0.05 p = 0.81	r = 0.29 p = 0.13	r = 0.39 p = 0.04	r = -0.05 p = 0.78
CA-125 (U/mL)	r = -0.04 p = 0.82	r = -0.11 p = 0.59	r = 0.06 p = 0.76	r = 0.22 p = 0.27	r = 0.02 p = 0.90	r = 0.19 p = 0.34	r = 0.24 p = 0.22	r = -0.11 p = 0.58
MMP-7 (ng/mL)	r = 0.004 p = 0.98	r = -0.22 p = 0.26	r = 0.03 p = 0.89	r = -0.06 p = 0.78	r = -0.17 p = 0.38	r = -0.03 p = 0.89	r = 0.13 p = 0.52	r = -0.14 p = 0.47
Periostin (ng/mL)	r = -0.17 p = 0.39	r = -0.22 p = 0.27	r = -0.37 p = 0.05	r = -0.19 p = 0.32	r = -0.02 p = 0.92	r = 0.10 p = 0.63	r = 0.13 p = 0.52	r = 0,02 p = 0.93
CCL18 (ng/mL)	r = -0.06 p = 0.76	r = -0.21 p = 0.28	r = -0.07 p = 0.71	r = 0.12 p = 0.54	r = 0.07 p = 0.74	r = 0.29 p = 0.13	r = 0.42 p = 0.03	r = -0.12 p = 0.53

Abbreviations: IPF – idiopathic pulmonary fibrosis, FVC – forced vital capacity, T_{L,CO} – transfer factor of the lung for carbon monoxide, 6MWT – six-minute walk test, KL-6 – Krebs von den Lungen-6, SP-D – surfactant protein D, CA19-9 – cancer antigen 19-9, CA-125 – cancer antigen 125, MMP-7 – matrix metalloproteinase 7, CCL18 – chemokine (C-C motif) ligand 18.

Table S10. Correlations of serum biomarkers levels with clinical measures in IPF patients after 18 months of antifibrotic therapy.

	FVC % pred.	T _{L,CO} % pred.	Age (years)	Time since diagnosis (years)	Pack-years (years)	GAP index	CPI score	6MWT (meters)
KL-6 (U/mL)	r = -0.41 p = 0.03	r = -0.53 p = 0.004	r = -0.20 p = 0.31	r = -0.02 p = 0.93	r = 0.18 p = 0.35	r = 0.26 p = 0.18	r = 0.46 p = 0.01	r = -0.28 p = 0.32
SP-D (ng/mL)	r = -0.34 p = 0.08	r = -0.29 p = 0.14	r = -0.03 p = 0.88	r = -0.15 p = 0.46	r = 0.10 p = 0.60	r = 0.25 p = 0.20	r = 0.24 p = 0.22	r = -0.01 p = 0.95
CA19-9 (U/ml)	r = -0.11 p = 0.59	r = -0.33 p = 0.09	r = 0.03 p = 0.90	r = 0.42 p = 0.03	r = 0.09 p = 0.63	r = 0.24 p = 0.23	r = 0.31 p = 0.10	r = 0.19 p = 0.35
CA-125 (U/mL)	r = 0.13 p = 0.51	r = -0.14 p = 0.48	r = 0.10 p = 0.60	r = 0.22 p = 0.26	r = 0.08 p = 0.70	r = 0.16 p = 0.42	r = 0.22 p = 0.26	r = -0.17 p = 0.41
MMP-7 (ng/mL)	r = -0.09 p = 0.64	r = -0.25 p = 0.21	r = 0.09 p = 0.66	r = -0.02 p = 0.91	r = -0.24 p = 0.23	r = 0.22 p = 0.25	r = 0.12 p = 0.55	r = 0.01 p = 0.95
Periostin (ng/mL)	r = -0.20 p = 0.31	r = -0.19 p = 0.34	r = -0.24 p = 0.22	r = -0.09 p = 0.64	r = -0.15 p = 0.45	r = 0.02 p = 0.92	r = -0.05 p = 0.81	r = -0.18 p = 0.39
CCL18 (ng/mL)	r = 0.04 p = 0.86	r = -0.10 p = 0.62	r = -0.23 p = 0.24	r = -0.03 p = 0.90	r = 0.27 p = 0.17	r = 0.03 p = 0.89	r = 0.12 p = 0.53	r = -0.19 p = 0.35

Abbreviations: IPF – idiopathic pulmonary fibrosis, FVC – forced vital capacity, T_{L,CO} – transfer factor of the lung for carbon monoxide, 6MWT – six-minute walk test, KL-6 – Krebs von den Lungen-6, SP-D – surfactant protein D, CA19-9 – cancer antigen 19-9, CA-125 – cancer antigen 125, MMP-7 – matrix metalloproteinase 7, CCL18 – chemokine (C-C motif) ligand 18.

Table S11. Correlations of serum biomarkers levels with clinical measures in IPF patients after 24 months of antifibrotic therapy.

	FVC % pred.	T _{L,CO} % pred.	Age (years)	Time since diagnosis (years)	Pack-years (years)	GAP index	CPI score	6MWT (meters)
KL-6 (U/mL)	r = -0.50 p = 0.006	r = -0.63 p = 0.0006	r = -0.42 p = 0.03	r = 0.21 p = 0.28	r = 0.14 p = 0.48	r = 0.27 p = 0.16	r = 0.33 p = 0.08	r = -0.27 p = 0.21
SP-D (ng/mL)	r = -0.41 p = 0.03	r = -0.47 p = 0.02	r = -0.22 p = 0.27	r = -0.04 p = 0.84	r = 0.14 p = 0.48	r = 0.43 p = 0.02	r = 0.11 p = 0.57	r = -0.32 p = 0.12
CA19-9 (U/mL)	r = 0.001 p = 0.99	r = -0.48 p = 0.01	r = -0.0003 p = 0.99	r = 0.45 p = 0.02	r = 0.11 p = 0.57	r = 0.26 p = 0.19	r = 0.56 p = 0.002	r = -0.14 p = 0.51
CA-125 (U/mL)	r = -0.04 p = 0.86	r = -0.10 p = 0.63	r = 0.16 p = 0.43	r = 0.24 p = 0.21	r = -0.001 p = 0.99	r = 0.17 p = 0.38	r = 0.28 p = 0.16	r = -0.009 p = 0.97
MMP-7 (ng)	r = 0.04 p = 0.82	r = -0.07 p = 0.72	r = 0.10 p = 0.62	r = 0.04 p = 0.82	r = -0.14 p = 0.48	r = -0.12 p = 0.56	r = 0.09 p = 0.63	r = -0.02 p = 0.92
Periostin (ng/mL)	r = -0.25 p = 0.22	r = -0.16 p = 0.45	r = -0.29 p = 0.15	r = -0.12 p = 0.57	r = -0.12 p = 0.54	r = -0.06 p = 0.78	r = 0.0002 p = 0.99	r = 0.22 p = 0.31
CCL18 (ng/mL)	r = -0.19 p = 0.34	r = -0.48 p = 0.01	r = -0.12 p = 0.54	r = -0.16 p = 0.40	r = 0.20 p = 0.32	r = 0.42 p = 0.03	r = 0.40 p = 0.03	r = -0.23 p = 0.27

Abbreviations: IPF – idiopathic pulmonary fibrosis, FVC – forced vital capacity, T_{L,CO} – transfer factor of the lung for carbon monoxide, 6MWT – six-minute walk test, KL-6 – Krebs von den Lungen-6, SP-D – surfactant protein D, CA19-9 – cancer antigen 19-9, CA-125 – cancer antigen 125, MMP-7 – matrix metalloproteinase 7, CCL18 – chemokine (C-C motif) ligand 18.

Table S12. Associations of changes in serum biomarkers levels and changes in physiologic and functional measures in the stables subgroup of patients with IPF (n = 18) during the first year of antifibrotic therapy.

	Change in FVC % pred. (absolute change)	Change in T_{L,CO} % pred. (ab- solute change)	Change in 6MWT (%)
Change in KL-6 serum levels (%)	r = 0.40 p = 0.10	r = 0.21 p = 0.41	r = -0.20 p = 0.44
Change in SP-D serum levels (%)	r = 0.34 p = 0.17	r = -0.29 p = 0.24	r = -0.38 p = 0.12
Change in CA19-9 serum levels (%)	r = -0.09 p = 0.74	r = -0.34 p = 0.20	r = -0.002 p = 0.99
Change in CA-125 serum levels (%)	r = -0.11 p = 0.65	r = 0.01 p = 0.96	r = -0.37 p = 0.13
Change in MMP-7 serum levels (%)	r = 0.09 p = 0.71	r = -0.06 p = 0.82	r = -0.19 p = 0.45
Change in periostin serum levels (%)	r = -0.01 p = 0.96	r = 0.47 p = 0.05	r = -0.01 p = 0.96
Change in CCL18 serum levels (%)	r = -0.03 p = 0.92	r = 0.09 p = 0.73	r = -0.04 p = 0.86

Table S13. Associations of changes in serum biomarkers levels and changes in physiologic and functional measures in the progressors subgroup of patients with IPF (n = 10) during the first year of antifibrotic therapy.

	Change in FVC % pred. (absolute change)	Change in T_{L,CO} % pred. (ab- solute change)	Change in 6MWT (%)
Change in KL-6 serum levels (%)	r = -0.62 p = 0.06	r = -0.16 p = 0.66	r = 0.28 p = 0.43
Change in SP-D serum levels (%)	r = -0.72 p = 0.02	r = -0.19 p = 0.61	r = 0.12 p = 0.76
Change in CA19-9 serum levels (%)	r = 0.49 p = 0.15	r = -0.16 p = 0.66	r = 0.01 p = 0.99
Change in CA-125 serum levels (%)	r = 0.21 p = 0.56	r = 0.05 p = 0.89	r = 0.02 p = 0.97
Change in MMP-7 serum levels (%)	r = 0.20 p = 0.58	r = -0.21 p = 0.56	r = -0.53 p = 0.12
Change in periostin serum levels (%)	r = 0.09 p = 0.81	r = -0.28 p = 0.43	r = 0.01 p = 0.99
Change in CCL18 serum levels (%)	r = -0.27 p = 0.45	r = -0.36 p = 0.31	r = 0.83 p = 0.005

Table S14. Associations of changes in serum biomarkers levels and changes in physiologic and functional measures in the stables subgroup of patients with IPF (n = 17) during the second year of antifibrotic therapy.

	Change in FVC % pred. (absolute change)	Change in T_{L,CO} % pred. (ab- solute change)	Change in 6MWT (%)
Change in KL-6 serum levels (%)	r = 0.49 p = 0.05	r = 0.10 p = 0.72	r = -0.26 p = 0.39
Change in SP-D serum levels (%)	r = 0.16 p = 0.54	r = -0.09 p = 0.75	r = 0.06 p = 0.85
Change in CA19-9 serum levels (%)	r = 0.09 p = 0.75	r = 0.04 p = 0.88	r = 0.08 p = 0.80

Change in CA-125 serum levels (%)	r = -0.01 p = 0.96	r = 0.00 p = 0.99	r = 0.19 p = 0.53
Change in MMP-7 serum levels (%)	r = -0.06 p = 0.82	r = -0.29 p = 0.27	r = -0.16 p = 0.59
Change in periostin serum levels (%)	r = -0.17 p = 0.51	r = -0.21 p = 0.44	r = 0.08 p = 0.81
Change in CCL18 serum levels (%)	r = 0.35 p = 0.17	r = -0.44 p = 0.09	r = 0.33 p = 0.27

Table S15. Associations of changes in serum biomarkers levels and changes in physiologic and functional measures in the progressors subgroup of patients with IPF (n = 11) during the second year of antifibrotic therapy.

	Change in FVC % pred. (absolute change)	Change in T_{LCO} % pred. (ab- solute change)	Change in 6MWT (%)
Change in KL-6 serum levels (%)	r = -0.71 p = 0.02	r = -0.12 p = 0.76	r = 0.20 p = 0.56
Change in SP-D serum levels (%)	r = -0.06 p = 0.86	r = -0.22 p = 0.54	r = -0.16 p = 0.63
Change in CA19-9 serum levels (%)	r = -0.23 p = 0.55	r = 0.17 p = 0.70	r = 0.13 p = 0.74
Change in CA-125 serum levels (%)	r = -0.25 p = 0.47	r = -0.49 p = 0.15	r = 0.41 p = 0.21
Change in MMP-7 serum levels (%)	r = -0.14 p = 0.69	r = 0.08 p = 0.84	r = -0.13 p = 0.71
Change in periostin serum levels (%)	r = -0.45 p = 0.17	r = -0.59 p = 0.08	r = 0.28 p = 0.40
Change in CCL18 serum levels (%)	r = -0.12 p = 0.73	r = 0.05 p = 0.89	r = 0.21 p = 0.54