



Supplementary Fig. S1. Kaplan-Meier analyses for the 24-month retention rates of JAK inhibitors in patients with RA-ILD, stratified by the types of JAK inhibitors.

Kaplan-Meier curves show the 24-month retention rates for JAK inhibitors, stratified into three groups: those treated with baricitinib, tofacitinib, and others.

Supplementary Table S1. Baseline characteristics of patients who were able to continue JAK inhibitor treatment for at least 12 months.

Characteristics	All (n=30)	Non-MTX group (n=18)	MTX group (n=12)	p-value
Age, median [IQR] (years)	73.5 [60.0-78.3]	76.5 [70.0-79.0]	67.0 [58.0-76.3]	0.10
Female (n, %)	26 (86.7)	16 (88.9)	10 (83.3)	1.00
Smoking ^a (n, %)	14 (46.7)	6 (35.3)	8 (66.7)	0.14
UIP pattern of ILD (n, %)	17 (56.7)	11 (61.1)	6 (50.0)	0.59
HRCT score, median [IQR]	4.0 [2.8-7.3]	4.0 [3.5-7.5]	4.0 [2.0-7]	0.73
Baseline PFT, median [IQR] %FVC (%)	88.3 [74.9-107.2]	80.6 [62.9-102.3]	97.0 [86.4-116.7]	0.99
D2T RA (n, %)	23 (76.7)	13 (72.2)	8 (66.7)	0.78
CDAI	11.9 [8.5-23.6]	11.7 [6.3-24.5]	13.2 [11.3-20.7]	0.98
Laboratory test, median [IQR]				
CRP (mg/dL)	0.19 [0.03-1.46]	0.27 [0.03-1.80]	0.14 [0.03-0.48]	0.83
KL-6 (U/ml)	496 [306.5-553.3]	525 [340-558.5]	309 [286-504.5]	0.37
MMP-3 (ng/mL)	87.2 [42.3-101.8]	113.9 [42.3-215.9]	75.1 [41.7-177.9]	0.94
Current treatment of RA (n, %)				
Glucocorticoids	8 (26.7)	5 (27.8)	3 (25.0)	0.77
Dose of prednisolone, median [IQR] (mg)	6 [4-10]	7 [6-12]	4 [1.8-4.8]	0.03*
csDMARDs	17 (56.7)	5 (27.8)	12 (100.0)	<0.01*
Number of prior b/tsDMARDs, median [IQR]	3 [2-5]	3.5 [2-6]	2 [0.5-3]	0.02*

CCP: cyclic citrullinated peptide; b/tsDMARDs: biological or targeted synthetic disease-modifying anti-rheumatic drugs; BMI: body mass index; CDAI: Clinical Disease Activity Index; CRP: C-reactive protein; csDMARDs: conventional synthetic disease-modifying anti-rheumatic drugs; D2T RA: difficult-to-treat rheumatoid arthritis; %FVC: percent predicted forced vital capacity; HRCT: high-resolution computed tomography; ILD: interstitial lung disease; IQR: interquartile range; KL-6: Krebs von den Lungen-6; MMP-3: matrix metalloproteinase-3; PFT: pulmonary function test; UIP: usual interstitial pneumonia. ^a Smoking included past or current habit.

Supplementary Table S2. Multiple regression analysis for %FVC and HRCT score changes after initiation of JAK inhibitors.

	Estimate	Std error	t-value	p-value
%FVC changes				
Female	-6.05	5.32	-1.14	0.34
Age	1.46	0.39	3.77	0.17
%FVC at baseline	-1.04	0.26	-4.04	0.15
MTX use	-16.84	4.73	-3.57	0.08
HRCT score				
Female	5.16	6.57	0.79	0.49
Age	-0.09	0.19	-0.47	0.67
HRCT scores at baseline	-1.56	0.46	-3.40	0.18
MTX use	-1.22	4.33	-0.28	0.79

%FVC: percent predicted forced vital capacity; Std: standard. * $p<0.05$.