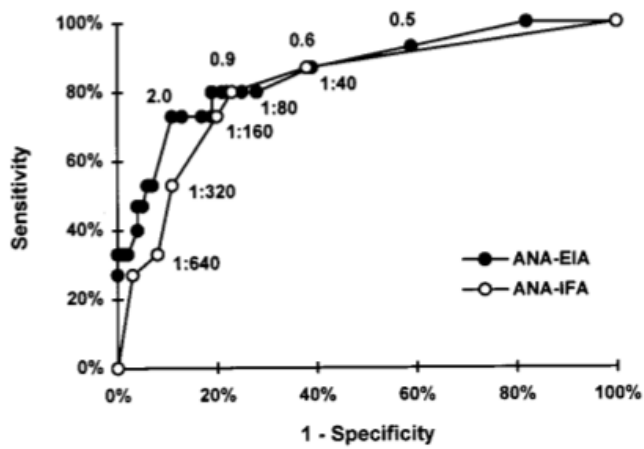


Supplementary Figure S1.

ROC curves for ANA-IFA and ANA-EIA for the common period between 5 January and 23 February 1995, to truly reflect the patient population at University of California at San Francisco ($P =$ not significant)



Supplementary Table S1. Baseline Demographics of Patients with ILD by Center

<u>Characteristic</u>	University of Chicago			Northshore University HealthSystem		
	ANA Positive	ANA Negative	P-value	ANA Positive	ANA Negative	P-value
Age, years (SD)	64.2 (12.3)	54.2 (11.8)	0.966	62.4 (12.6)	68.0 (12.2)	0.015
Male, n (%)	357 (50.6)	187 (55.0)	0.187	5 (13.9)	73 (39.7)	0.004
BMI, mean (SD)	29.6 (6.6)	30.2 (6.8)	0.015	29.5 (5.7)	29.0 (5.8)	0.691
Caucasian, n (%)	490 (69.5)	274 (80.6)	<0.001	25 (69.4)	129 (70.1)	1.000
African American, n (%)	141 (20.0)	41 (12.1)	0.002	6 (16.7)	15 (8.2)	0.124
Hispanic, n (%)	50 (7.1)	15 (4.4)	0.093	0 (0.0)	0 (0.0)	N/A
Asian, n (%)	24 (3.4)	10 (2.9)	0.693	1 (2.8)	12 (6.5)	0.699
Other, n (%)	0 (0.0)	0 (0.0)	N/A	4 (11.1)	28 (15.2)	0.615
<u>Lung Function</u>						
TLC %, mean (SD)	68.6 (17.0)	69.9 (17.0)	0.306	76.4 (18.3)	83.7 (22.0)	0.096
FVC %, mean (SD)	63.9 (18.5)	65.5 (18.0)	0.209	67.7 (15.8)	76.8 (19.8)	0.013
DLCO %, mean (SD)	50.1 (21.9)	51.8 (20.9)	0.265	48.7 (18.8)	54.0 (23.0)	0.239
<u>ILD Subtype</u>						
IPF, n (%)	202 (28.7)	126 (37.1)	0.007	10 (27.8)	64 (34.8)	0.448
IAPAF, n (%)	140 (19.9)	31 (9.1)	<0.001	1 (2.8)	5 (2.7)	1.000
CTD-ILD, n (%)	172 (24.4)	58 (17.1)	0.008	5 (13.9)	5 (2.7)	0.012
HP, n (%)	82 (11.6)	49 (14.4)	0.231	0 (0.0)	10 (5.4)	0.374
Other ILD, n (%)	18 (2.6)	18 (5.3)	0.029	11 (30.5)	49 (26.6)	0.683
Unclassifiable ILD, n (%)	91 (12.8)	58 (17.0)	0.074	9 (25.0)	51 (27.8)	0.839

TLC = total lung capacity; FVC = forced vital capacity; DLCO = diffusion capacity for carbon monoxide
 IPF = idiopathic pulmonary fibrosis; IAPAF = interstitial pneumonia with autoimmune features; CTD-ILD =
 Connective tissue disease associated ILD; HP = hypersensitivity pneumonitis; ILD = interstitial lung disease.
 Other ILD include pneumoconiosis, lymphocytic interstitial pneumonia, Langerhans cell histiocytosis, cryptogenic
 organizing pneumonia, lymphangiomyomatosis, and other less common ILDs with small sample sizes.

*P value based on univariate analysis for categorical variables. For example, Caucasian compared to non-Caucasian, IPF compared to non-IPF patients, etc. P value based on two-tailed student t test for continuous variables. For example, age, BMI.

Exception for participants: Age, n=1265; gender, n=1265; ANA serologies, n=1265; BMI, n=1122; TLC, n=989; FVC, n=1162; DLCO, n=1115; and other ILD, n=95.

Supplementary Table S2. Variable Count for Baseline Demographics of ILD Cohort by Center and ANA Seropositivity

	University of Chicago (n = 1045)	Northshore University HealthSystem (n = 220)	P-value
TLC, n(%)	818 (78.3)	171 (77.7)	0.858
FVC, n(%)	958 (91.7)	204 (92.7)	0.685
DLCO, n(%)	940 (90.0)	175 (79.5)	<0.001
Age, n(%)	1045 (100.0)	220 (100.0)	1.000
Gender, n(%)	1045 (100.0)	220 (100.0)	1.000
BMI, n(%)	902 (86.3)	220 (100.0)	<0.001
ANA serology, n(%)	1045 (100.0)	220 (100.0)	1.000
	ANA Seropositive (n = 741)	ANA Seronegative (n= 524)	P-value
TLC, n(%)	594 (80.2)	395 (75.4)	0.045
FVC, n(%)	684 (92.3)	478 (91.2)	0.531
DLCO, n(%)	668 (90.1)	447 (85.3)	0.010
Age, n(%)	741 (100.0)	524 (100.0)	1.000
Gender, n(%)	741 (100.0)	524 (100.0)	1.000
BMI, n(%)	661 (89.2)	459 (87.6)	0.420
ANA serology, n(%)	741 (100.0)	524 (100.0)	1.000

TLC = total lung capacity; FVC = forced vital capacity; DLCO = diffusion capacity for carbon monoxide

Supplementary Table S3. Prevalence of organic exposures among patients with and without a diagnosis of HP.

Exposure	HP	Non-HP	Total	P-value
Organic Exposure, n (%)	95 (67.4)	370 (32.9)	465	<0.001
No Organic Exposure, n (%)	46 (32.6)	754 (67.1)	800	
Total, n (%)	141 (100.0)	1124 (100.0)	1265	

HP = hypersensitivity pneumonitis

Supplementary Table S4. Prevalence of patients with available documentation of radiographic emphysema and smoking history amongst individuals with unclassifiable ILD*

<u>All Unclassifiable ILD</u>	ANA Seropositive	ANA Seronegative	Total	P- value
Emphysema, n (%)	24 (31.6)	12 (26.1)	36 (29.5)	0.519
No emphysema, n (%)	52 (68.4)	34 (73.9)	86 (70.5)	
Total, n (%)	76 (100.0)	46 (100.0)	122 (100.0)	
<u>Unclassifiable ILD with significant smoking history</u>				
Emphysema, n (%)	16 (50.0)	4 (23.5)	20 (40.8)	0.073
No emphysema, n (%)	16 (50.0)	13 (76.5)	29 (59.2)	
Total, n (%)	32 (100.0)	17 (100.0)	49 (100.0)	
<u>Unclassifiable ILD without significant smoking history</u>				
Emphysema, n (%)	8 (18.2)	8 (27.6)	16 (21.9)	0.342
No emphysema, n (%)	36 (81.8)	21 (72.4)	57 (78.1)	
Total, n (%)	44 (100.0)	29 (100.0)	73 (100.0)	

*Significant smoking history was regarded as patients with ≥ 10 pack year history of tobacco use.
ILD = interstitial lung disease

Supplementary Table S5. Prevalence of ANA seropositivity in patients with available documentation for a secondary diagnosis of pneumoconiosis

	ANA Seropositive	ANA Seronegative	Total	<i>P</i> -value
<i>All ILD</i>				
Pneumoconiosis, n (%)	64 (9.1)	21 (6.2)	85 (8.1)	0.120
No pneumoconiosis, n (%)	641 (90.9)	319 (93.8)	960 (91.9)	
Total, n (%)	705 (100.0)	340 (100.0)	1045 (100.0)	
<i>Other ILD</i>				
Pneumoconiosis, n (%)	5 (27.8)	1 (5.6)	6 (16.7)	0.074
No pneumoconiosis, n (%)	13 (72.2)	17 (94.4)	30 (83.3)	
Total, n (%)	18 (100.0)	18 (100.0)	36 (100.0)	

ILD = interstitial lung disease