Insights On The Management And Outcomes Of Patients With Progressive Fibrosing Interstitial Lung Disease In Clinical Practice: INSIGHTS-ILD Registry

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Aim

To obtain real-life data on the characteristics, management and clinical course of patients with progressive fibrosing interstitial lung disease (fILD).

Methods

- INSIGHTS-ILD is an ongoing prospective registry with a non-probability sampling approach in 30 expert sites across Germany.
- Patients are eligible if they have fILD, DLCO <= 80 % of the predicted value, interstitial lung fibrosis >10% on HRCT, and are on active antiinflammatory, immunomodulatory and/or antifibrotic therapy.
- Patients with IPF are excluded. Baseline data are analysed descriptively (data cut 8 May 2023).
- Study registration identifiers: DRKS00027389, BfArM NIS 7562.

Results

A total of 431 patients were included. Baseline characteristics are shown in ***Table 1***.

- The majority of patients were elderly (mean age 65.8 ± 12.0 years); there were slightly more males (55.7%) than females.
- 42.9% of patients did never smoke. Exposures possibly related to ILD were reported for environmental exposures in 45.0% and for exposures to drugs in 9.3%.
- The most frequently reported ILD entities were fibrosing idiopathic interstitial pneumonia (FIIP/IIP) in 24.4%, hypersensitivity pneumonitis (HP) in 27.6%, unclassifiable ILD in 13.0%. Details are shown in ***Figure 1***.
- Disease symptoms at entry are shown in ***Figure 2***, comorbidities in ***Figure 3***.
- Mean time from ILD diagnosis to inclusion was 5.0 ± 6.0 years. Patients with diagnosis with 90 days before inclusion accounted for 7.7%. Patients were predominantly in WHO functional classes II and III (46.8 % and 38.6%).
- Borg Dyspnoea score at rest was 1.3 ± 2.1, after exercise 4.7 ± 2.4. Diagnosis was made through HRCT plus histology in 166 patients (38.5%), through HRCT alone in 211 patients (49.0%). Bronchoalveolar lavage was done in 283 patients (65.7%).
- Mean forced vital capacity (FVC) was 70 ± 20 % of the predicted value, inspiratory vital capacity (VCin) 70 ± 21% of the predicted value and DLco corrected for hemoglobin was 36 ± 20% of the predicted value.
- Mean 6-min walk distance (performed in 231 patients) was 370 ± 117 m. Median NT-proBNP was 140 pg/ml.
- Current treatment included oral steroids in 63.6%, antifibrotic therapy in 50.3%, azathioprine in 13.5%, MTX in 12.3%, and MMF in 11.4% ***(Figure 4)***.
- Mean quality of life on the 0-100 visual analogue scale was 58 ± 20 points.
- During follow-up, a decline of 107.2 ± 45.6 ml FVC by 12 months was observed.
- Overall mortality at 6 months was 95%, at one year 92%.

Conclusions

- INSIGHTS-ILD documents one of the largest fILD cohorts in Europe.
- Characteristics of patients in this registry match well with fILD patients in randomised controlled studies.
- A quarter of the patients were on antifibrotic therapy alone, a quarter on antifibrotic plus anti-inflammatory therapy (mostly prednisolone), and about half on anti-inflammatory treatments alone. We speculate that patient trajectories on the different treatments will inform about optimal management of fILD patients.

Table 1. **Patient characteristics at baseline**

		n (%) / mean (SD) n=431
Male		240 (55.7%)
Age, years		65.8 (12.0)
Ethnicity Caucasian		420 (97.4%)
Body Mass Index, kg/m²		27.1 (5.3)
Smoking status		
	never	185 (42.9%)
	stopped	204 (47.3%)
	current	11 (2.6%)
	unknown	31 (7.2%)
Familial ILD	unknown	160 (37.1%)
	No	251 (58.2%)
	Yes	20 (4.6%)
WHO functional class (n=171)		
	I	14 (8.2%)
	II	80 (46.8%)
	III	66 (38.6%)
	IV	11 (6.4%)
HRCT findings according to current ATS/ERS Criteria		
UIP pattern		74 (17.2%)
UIP likely		42 (9.7%)
UIP undetermined		27 (6.3%)
Alternative pattern		232 (53.8%)
BAL lymphocyte count (% absolute)		22.6 (21.1)
Six-minute walk distance (n=231), m		370 (117)
FVC % pred (n=426)		69.9 (20.3)
DL_{CO} % pred (n=289)		36.2 (20.1)
Longterm O_2 (n=409)		160 (39.1%)
Lung TX Listing (n=399)		5 (1.3%)

Figure 1a. **Type of ILD at entry** (multiple answers possible)

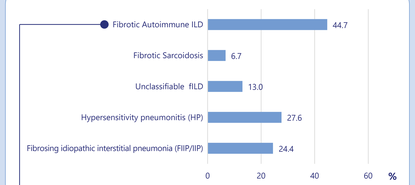


Figure 1b. **Subset of Fibrotic Autoimmune ILD**

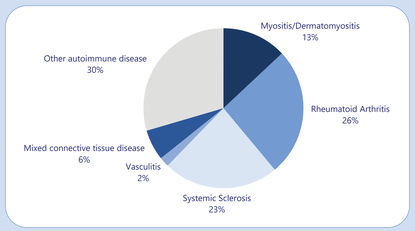


Figure 2. **Symptoms**

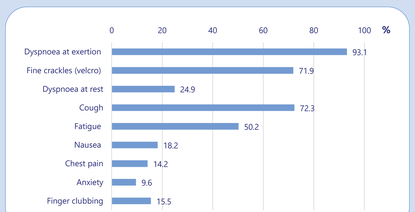


Figure 3. **Comorbidities**

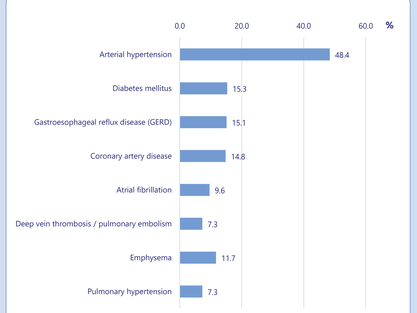


Figure 4. **Current therapy for ILD**

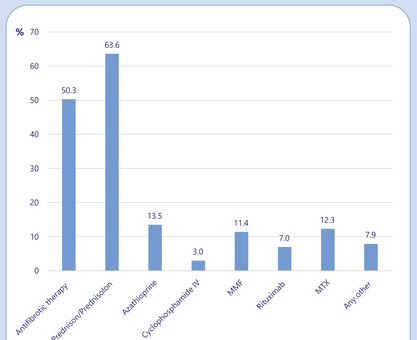


Figure 5. **Kaplan-Meier estimate for transplantation-free survival**

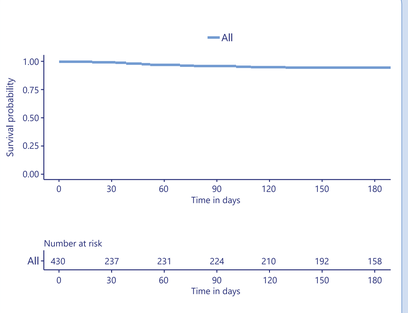
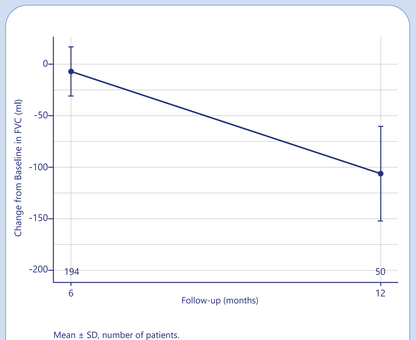


Figure 6. **FVC decrease at 12 months versus baseline**



Mean ± SD, number of patients.

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Reference: Behr et al. Investigating significant health trends in progressive fibrosing interstitial lung disease (INSIGHTS-ILD): rationale, aims and design of a nationwide prospective registry. BMC Pulmonary Medicine 2023; 23: 64