Prospective observational investigation of possible correlations between change in FVC and change in cough or dyspnea scores using the living with pulmonary fibrosis questionnaire (L-PF) between baseline and after approximately 52 weeks of nintedanib treatment in patients suffering from chronic fibrosing ILD with a progressive phenotype. (INREAL)

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Last updated: 15/05/2025

Study Finalised

Administrative details

EU PAS number

EUPAS38272

Study ID

46027

DARWIN EU® study

No

Study countries

☐ Germany

Study description

This NIS will investigate changes in dyspnea or cough as measured with the L-PF questionnaire over 52 weeks of nintedanib treatment in patients suffering from chronic fibrosing ILD with a progressive phenotype (excluding IPF), including a snapshot-analysis before last patient in (LPI) to evaluate a possible correlation between changes in FVC and L-PF (dyspnea and cough). The study hypothezises that in a one year observational study a correlation can be found between changes in lung function measured by FVC and the changes in the scores for dyspnea and cough of the L-PF questionnaire in ILD patients. 100 patients will be included in 20 sites in Germany.

Study status

Finalised

Research institutions and networks

Institutions

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Contact details

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Primary lead investigator

Michael Kreuter

Primary lead investigator

Study timelines

Date when funding contract was signed

Planned: 30/06/2020

Actual: 15/09/2020

Study start date

Planned: 31/05/2021

Actual: 22/06/2021

Data analysis start date

Planned: 01/10/2023

Actual: 28/06/2024

Date of final study report

Planned: 30/12/2023

Actual: 24/03/2025

Sources of funding

- Pharmaceutical company and other private sector

More details on funding

Boehringer Ingelheim Pharma GmbH & Co. KG

Regulatory

Was the study required by a regulatory body?

No

Is the study required by a Risk Management Plan (RMP)?

Not applicable

Methodological aspects

Study type

Study type list

Study topic:

Human medicinal product

Study type:

Non-interventional study

Scope of the study:

Drug utilisation

Effectiveness study (incl. comparative)

Data collection methods:

Primary data collection

Study design:

Single-arm, open-label observational cohort study according to §4, section 23 and §67, section 6 German Medicines Act

Main study objective:

The primary objective is to investigate changes in dyspnea or cough as measured with the L-PF questionnaire over 52 weeks of nintedanib treatment in patients suffering from chronic fibrosing ILD with a progressive phenotype (excluding IPF), including a snapshot-analysis before LPI, to evaluate a possible correlation between changes in FVC and L-PF (dyspnea and cough).

Study Design

Non-interventional study design

Cohort

Study drug and medical condition

Medicinal product name

OFEV

Study drug International non-proprietary name (INN) or common name

NINTEDANIB

Anatomical Therapeutic Chemical (ATC) code

(L01EX09) nintedanib

nintedanib

Medical condition to be studied

Interstitial lung disease

Additional medical condition(s)

PF-ILD

Population studied

Short description of the study population

patients suffering from chronic fibrosing ILD with a progressive phenotype

Age groups

- Adults (18 to < 46 years)
- Adults (46 to < 65 years)
- Adults (65 to < 75 years)
- Adults (75 to < 85 years)
- Adults (85 years and over)

Estimated number of subjects

100

Study design details

Setting

Data of 100 patients suffering from chronic fibrosing ILD with a progressive phenotype treated with nintedanib in routine suffering from chronic fibrosing ILD with a progressive phenotype practice are planned to be recruited for this NIS by about 20 specialists, experienced in treating ILD patients, (e. g., pulmonologists and rheumatologists) throughout Germany.

Outcomes

Correlation between change from baseline to week 52 in FVC % pred. and change from baseline to week 52 in dyspnea symptom score Correlation between change from baseline to week 52 in FVC % pred. and change from baseline to week 52 in cough symptom score, Correlation between change from baseline to week 52 in FVC mL and change from baseline to week 52 in dyspnea symptom score Correlation between change from baseline to week 52 in FVC mL and change from baseline to week 52 in cough symptom score Absolute change from baseline in L-PF cough symptom score at week 52 Absolute change from baseline in L-PF dyspnea symptom score at week 52

Data analysis plan

All patients having received at least one dose of nintedanib will be included in the treated set. All analyses will be performed on the treated set. For the analysis of the primary and secondary outcomes related to correlations, Pearson measures of correlation along with 95% two-sided confidence intervals and the two-sided p-values will be provided. The secondary outcomes related to absolute changes will be analysed using a restricted maximum likelihood (REML) based repeated measures approach. Analyses will include the fixed, categorical effect of visit, as well as the continuous, fixed covariates of baseline and baseline-by-visit interaction. An unstructured (co)variance structure will be used to model the within-patient measurements. Time to event endpoints over the whole trial will be analysed in a descriptive manner. Frequency tables and

Kaplan-Meier plots will be produced. Further continuous and categorical outcomes will be analyzed descriptively. No subgroup analyses are planned.

Summary results

Study population (102 treated patiens (pts.): mean age 70.47 ± 10.74 years, males (62.75%). Race/ethnicity not collected. Former (45.10%) or current (3.92%) smokers. Diagnoses: autoimmune disease associated ILDs (44.12%), IIPs (32.35%), exposure related ILDs (19.61%), sarcoidosis (3.92%).
Baseline mean FVC was 65.18 ± 18.86% pred. and 2296.37 ± 769.77 ml. After 52 weeks of nintedanib treatment, mean FVC was 65.67 ± 19.62% pred. and 2304.79 ± 710.73 ml. Mean dyspnea symptom score was 24.71 ± 18.56 at baseline and after 52 weeks of treatment, the score was 27.32 ± 21.67. Mean cough symptom score was 37.46 ± 25.67 at baseline and 36.85 ± 28.59 after 52 weeks of treatment.
Due to missing patient questionnaires or other necessary variables for 64 out of all 102 patients, the primary outcome was analyzed for a total of 38 patients.
For the primary outcome, the correlation between change in FVC [% pred.] and change in dyspnea symptom score, the Pearson correlation coefficient was -0.26 and the p-value was 0.12 (95% CI -0.53 to 0.07). For the correlation between change in FVC [% predicted] and change in cough symptom score, the Pearson correlation coefficient was -0.11 and the p-value was 0.51 (95% CI -0.41 to 0.22).
For the secondary outcome, the correlation between the change in FVC [ml] and change in dyspnea symptom score, the Pearson correlation coefficient was -0.29 and the p-value was 0.08 (95% CI -0.56 to 0.03). For the correlation between change in FVC [ml] and change in cough symptom score, the Pearson correlation coefficient was -0.16 and the p-value was 0.35 (95% CI -0.45 to 0.17). Absolute change in dyspnea symptom score from baseline to week 52 was 6.75 ± 18.51, and in cough symptom score it was 2.50 ± 24.04.
69 pts. (67.65%) experienced 139 TEAEs. Overall, 24 STEAEs were reported in

16 pts. (15.69%), 91 TEADRs in 53 patients (51.96%), 3 STEADRs in 3 patients (2.94%), and 4 TEASIs in 3 pts. (2.94%). There were 10 fatal STEAEs among 8 pts. (7.84%).

Data management

ENCePP Seal

The use of the ENCePP Seal has been discontinued since February 2025. The ENCePP Seal fields are retained in the display mode for transparency but are no longer maintained.

Data sources

Data source(s), other

patient files

Data sources (types)

Other

Data sources (types), other

Prospective patient-based data collection

Use of a Common Data Model (CDM)

CDM mapping

No

Data quality specifications

Check conformance

Yes

Check completeness

Yes

Check stability

Yes

Check logical consistency

Yes

Data characterisation

Data characterisation conducted

Not applicable