Methods

This was a randomized, double-blind, second-dose design that has been described previously. In brief, subjects with CT or biopsy-confirmed usual interstitial pneumonia consistent with IPF were randomly allocated to placebo or PRM-151 treatment at an escalating dose of 3 mg/kg. PRM-151 doses were administered on Days 1, 3, 5, 7, and 15. CT scans were obtained at or prior to Screening and again 8 weeks after the initiation of treatment. Pulmonary function test (PFT) outcomes and 6MWD were assessed multiple times over the 8 weeks, including at Screening and 8 weeks after the initiation of treatment. HRCT scans were obtained at or prior to Screening and again at weeks 8 after the initiation of treatment. Clinical results previously reported from this trial1 were available on 18 subjects.

Clinical results previously reported from this trial1 indicated that 2 doses of PRM-151 (1 mg/kg, 3 mg/kg) were well tolerated and efficacious in all 18 subjects. A dose escalation of 8 subjects to 16 subjects.

Dose Group
Placebo 1 mg/kg 5 mg/kg 10 mg/kg

Subject
1 2 3 4 5 6 7 8 9 10

Screening FVC %
49 91 79 63 67 51 88 76 62 101

Post-Rx

Pre-Rx

Δ FVC %
-5 -1 -6 -4 -2 -12 13 9 1 -3

Δ Normal + Mild LAA
-23 -3 -8 -30 -2 -13 5 -4 -9 0

Δ over Rx

FluidDA

Imbio

Mean Δ IV Lobar (%)
10.0 0.4 — — — 2.0 -0.5 -1.9 10.5 -0.6

Results

No clear dose-response among the 3 PRM-151 doses was observed. PRM-151 treatment-related differences for clinical outcomes were consistent in both the Rotterdam and Duke IPF subject cohorts. Some HRCT scans were not suitable for retrospective analysis with the specific imaging software.

Conclusions / Interpretation

In this trial, imaging technologies that assess IPF-related structural and functional pathology demonstrated correlations consistent with well-characterized pulmonary function outcomes.

No clear dose-response among the 3 PRM-151 doses was observed. PRM-151 treatment-related differences for clinical outcomes were consistent in both the Rotterdam and Duke IPF subject cohorts. Some HRCT scans were not suitable for retrospective analysis with the specific imaging software.

Decline in predicted FVC % was observed in all placebo subjects, and these changes were generally associated with decreases in quantitative volumes of normal lung texture and lobar volumes in CT scans at the second time point.

Increase in mean change in FVC % over 8 weeks for PRM-151-treated subjects was observed. Only small changes in 6MWD and DLCO were observed. Extent of ILA-involved lung and lobar volumes also showed improvement with treatment.

The imaging technologies utilized in this trial may permit more rapid and efficient assessment of treatments for IPF and other interstitial lung diseases.

References