

Overview

Worldwide Clinical Trials employs more than 1,400 professionals around the world, with offices in North and South America, Eastern and Western Europe, Russia and Asia. One of the world's leading, full-service contract research organizations (CROs), we partner with sponsors in the pharmaceutical and biotechnology industries to deliver fully integrated clinical development and bioanalytical services, extending from first-in-human through phase IV studies.

Grounded in medicine and science, Worldwide Clinical Trials enables

sponsors to move from medical discovery into clinical development and commercialization, helping bring innovative solutions to market that deliver enhanced value and improve patient lives. Our employees are among the best in their fields - clinicians, scientists, operational and regulatory specialists who offer expertise across a range of therapeutic areas, including neuroscience, cardiovascular diseases, immune-mediated inflammatory disorders (IMID), and rare diseases.

Understanding the Unique Challenges in Respiratory Clinical Research

At Worldwide Clinical Trials, our experts understand that the commercial viability of therapeutics for chronic respiratory disorders is influenced by a range of factors, including perceived value and therapeutic novelty. This has particular relevance to illnesses with established pharmacotherapy such as asthma and COPD. Worldwide Clinical Trials' philosophy of employing expert clinical trial methodology, combined with our commitment to innovation, helps us deliver data relevant to multiple stakeholder perspectives and appropriate to each phase of your drug or device development.

Our close relationships with opinion leaders and practitioners in respiratory medicine ensure that complex study objectives and eligibility criteria evolve into a plan that delivers reliable metrics, consistently met timelines, and impeccable data. Our team has success in overcoming the unique challenges in conducting trials in respiratory disorders, including for example, determining the allergic status of patients with asthma and managing co-morbidity often associated with COPD.

Our Experience in the Study of Respiratory Diseases and Disorders

Worldwide has participated in the design, execution, or analysis for more than 100 trials in respiratory diseases and disorders since 2008. For these studies, we provided a wide range of services, such as clinical monitoring or project management services. Of these, the majority were in Chronic

Obstructive Pulmonary Disease (16 studies), Asthma (14 studies), and Cystic Fibrosis (10 studies).

Our experts have managed studies with a variety of therapeutic interventions, such as corticosteroids, bronchodilators, antibiotics, and kinase inhibitors.

WORLDWIDE RESPIRATORY EXPERIENCE

- Asthma
- COPD
- Cystic Fibrosis
- Idiopathic Pulmonary Fibrosis (IPF)
- Upper Respiratory Tract Infections (URTI)
- Perennial and seasonal rhinitis
- Pneumonia (hospital- and community-acquired)

UNIQUE CAPABILITIES IN RESPIRATORY RESEARCH

- Experience in conducting clinical trials in respiratory diseases from Phase I to IV, with more than 5,000 patients enrolled since 2008
- Established network of highly qualified investigators with strong experience in respiratory clinical research
- Medical and scientific expertise for protocol and program design and feasibility

UNIQUE ASSESSMENTS IN RESPIRATORY RESEARCH

- Spirometry
- Inflammatory Mediators in Sputum
- Methacholine/AMP Hyper-Responsiveness
- 6MWT
- St. George's Respiratory Questionnaire
- VAS Cough Severity



Our Experience, continued

Capabilities of the Worldwide clinical operations staff specific to respiratory diseases and disorders include:

- Extensive training on both medical and operational aspects of respiratory disorders.
- Experience in various scales and measures commonly used in respiratory diseases, including measures of pulmonary function (e.g., FEV1 and forced vital capacity (FVC) evaluated via spirometry), and Patient Reported Outcome instruments (e.g., St George’s Respiratory Questionnaire (SGRQ) and Quality of Life Short Form 36 (SF-36)).
- Success in overcoming unique challenges in conducting trials in respiratory diseases, for example, understanding the importance of the use of centralized spirometry and operational implications.
- Extensive practical knowledge of the impact of local clinical management practices and EC/IRB conventions on study design and implementation (e.g., access to principal investigators, knowledge regarding standard of care, and local reimbursement conventions).
- Completion of numerous phase I clinical trials for steroid inhalation compounds, as well as both short-acting and long-acting bronchodilators on asthma and allergy compounds.
- Expertise in the area of bioequivalence, requiring very accurate and consistent dose administration and multiple time-point blood sample collection for pharmacokinetic (PK) assessments.

Case Study Idiopathic Pulmonary Fibrosis

Worldwide Clinical Trials has conducted three studies in Idiopathic Pulmonary Fibrosis (IPF), including Phase II, phase III, and open label extension studies. Services provided for these studies included clinical monitoring, depot services, drug safety, investigators meetings, logistics, project management, quality assurance, regulatory services, and translations.

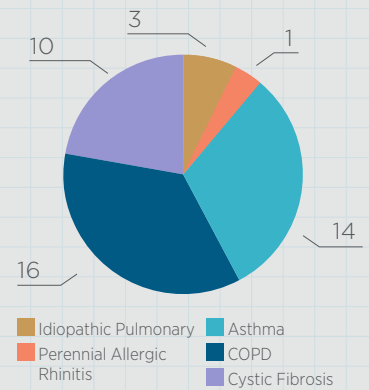
As a result, Worldwide is familiar with the peculiarities of IPF, including the importance of FVC as a reliable, valid, and responsive measure of disease status in patients with IPF; UIP as the characteristic histological pattern of IPF; definite UIP diagnosis through HRCT; and the meaning of % diffusing capacity (of the lung) for carbon monoxide. Additionally, Worldwide’s experts understand the pharmacologic treatment options and the use of pirfenidone as SoC in some countries but not in others; the need to identify “Centers of Excellence” in each country, because of

limited number of centers with the expertise, experience and contacts with networks like the Pulmonary Fibrosis Foundation in the US and Eur IPF Net; and modalities of performing the six-minute walking test in IPF.

As an example, Worldwide conducted a double blind, randomized, placebo-controlled, dose-ranging, Phase II trial evaluating the safety and efficacy of an investigational product in patients with IPF. Worldwide was responsible for conducting the study in Russia, and screened 21 patients and randomized 10 patients from three sites over 13 months with an enrollment rate of 3.1 patient/site/year. 80% of the randomized patients completed the 52-week study. A critical point in this study execution was the close collaboration of expert pulmonologists, radiologists, and pathologists at the investigational centers, which was facilitated by Worldwide’s expert study management team.

TRIALS BY INDICATION

Figure 1: Number of studies in respiratory disorders, by indication



PUBLISHED ARTICLES BY WORLDWIDE EXPERTS

“Chronic respiratory diseases and risk factors in 12 regions of the Russian Federation”
Original research published in the International Journal of COPD, an international, online peer-reviewed journal.

“Postapproval Development Options in COPD: A Case Study in Value-Based Healthcare Systems”
A position statement published in American Health & Drug Benefits (AHDB), an independent, peer-reviewed journal.

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