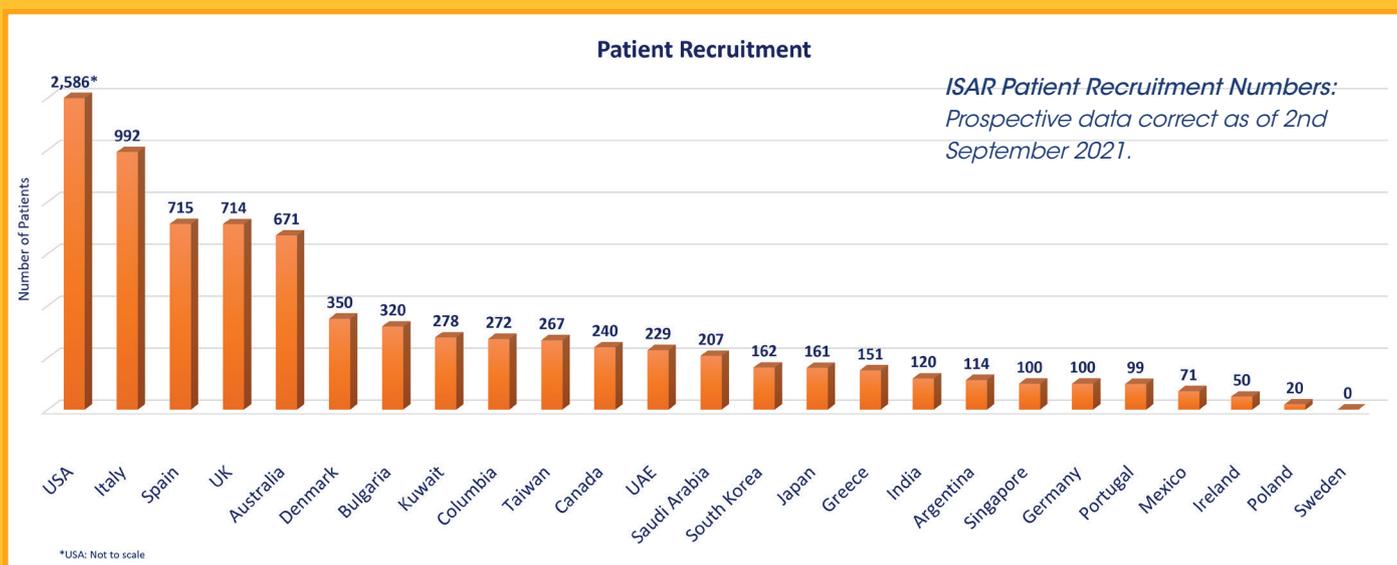


# INTERNATIONAL SEVERE ISAR ASTHMA REGISTRY

## ◆ ISAR So Far

The International Severe Asthma Registry (ISAR) marches on into its 4th year with data from 11,555 severe asthma patients (including 8,889 patients with prospective data) from our 23 collaborating countries. ISAR is delighted to announce and welcome Poland as our newest collaborator to the registry. Our plan is to continue growing and welcome France and Brazil later this year. Additionally, we are delighted to announce an 18-month extension for ISAR funding till November 2023!



## ◆ ISAR Publications in 2021

With 3 studies accepted and published in 2021 (see table below for more details) and 8 more submissions planned for 2021, ISAR continues to contribute to the development of high-quality academic research that will build on our understanding of severe asthma management and care. We are also pleased to share our involvement in an academic publication regarding severe asthma super-responders published in *The Journal of Allergy and Clinical Immunology: In Practice*.

Kerkhof M, et al. **"Asthma Phenotyping in Primary Care: Applying the International Severe Asthma Registry Eosinophil Phenotype Algorithm across All Asthma Severities"** *J Allergy Clin Immunol Pract*, 2021

The ISAR eosinophil phenotype gradient algorithm, when re-applied in a UK primary care cohort, found that eosinophilic asthma predominates in primary care and is associated with greater asthma severity and healthcare resource utilisation. This algorithm enables primary care physicians to identify and categorise patients into those with and without eosinophilic asthma and refer them, when appropriate, for phenotype-targeted treatment. Click [here](#) to read the full article!

## ◆ ISAR Publications in 2021

Heaney LG, et al.

**"Eosinophilic and Noneosinophilic Asthma: An Expert Consensus to Characterize Phenotypes in a Global Real-life Severe Asthma Cohort"** *Chest*, 2021

We characterised severe asthma patients according to discrete phenotypes through the development of a multicomponent, consensus-driven, and evidence-based eosinophil gradient algorithm, and found that the eosinophilic phenotype was more prevalent than previously thought. Click [here](#) to read the full article, and [here](#) for the publication slide deck.

Denton E, et al.

**"Cluster Analysis of Inflammatory Biomarker Expression in the International Severe Asthma Registry"** *J Allergy Clin Immunol Pract*, 2021

Through a hierarchical cluster analysis of biomarkers, we found that a high degree of biomarker overlap drove the development of 5 distinct patient clusters, each associated with unique patient characteristics. These results pave the way for future research to characterise further stratified severe asthma phenotypes and better measure treatment response. Click [here](#) to read the full article, and [here](#) for the slide deck.

Upham J, et al. **"Defining a Severe Asthma Super-Responder: Findings from a Delphi Process"** *J Allergy Clin Immunol Pract*, 2021

A consensus definition of a severe asthma super responder was defined using a modified Delphi process. This is a vital prerequisite for better understanding super-responder prevalence, predictive factors, and the mechanisms involved. Click [here](#) to read the full article!



## ◆ ISAR Steering Committee Meeting: 11th May 2021

A

The meeting was a success with 29 international ISC members, representing over 19 international countries in attendance

B

ISAR were able to provide the ISC with updates on the latest ISAR initiatives and developments including:

- Optional CoVID-19 bolt-on questionnaire (17 patients from 4 countries with a positive history of CoVID-19 infection to-date)
- Upcoming site & country-level asthma care reports providing an overview of longitudinal patient data trends

## 2021 Research Proposals

Following the annual research prioritisation exercise held during the ISAR Steering Committee (ISC) meeting earlier this year, we are delighted to confirm the two new fully funded research projects which have been prioritised by the ISC.

1. Phenotypic characteristics, comorbidities and response to therapeutic interventions associated with non-type 2 asthma (EMBER)
2. Effectiveness of biologics (by classes) in patients with different combination of T2 biomarkers (IGNITE) ISAR also received 7 network proposals (non-funded academic studies). Meetings are being scheduled to kick off these initiatives!

### ENLIGHTEN: ISAR Research (18 Projects)

#### What Severe Asthma Looks Like:

1. Characterisation of severe asthma worldwide: data from the International Severe Asthma Registry (11/2019)
2. The role of exacerbations on lung function trajectory
3. Characteristics of the eosinophilic asthma phenotype (04/2021)
4. Biomarker reliability in ISAR (**BRISAR**) (02/2021)
5. Patterns of onset & associated phenotypes (**PATH**)
6. Phenotypic Characteristics and response to therapeutic interventions/ Characteristics and comorbidities associated with non-type 2 asthma (**EMBER**)
7. *What is the prevalence of alpha-1 antitrypsin genetic abnormalities in severe asthma and do the characteristics of patients with such abnormalities differ from those of severe asthma patients without such abnormalities?*

#### Appropriate Care for Severe Asthma:

1. Hidden severe asthma in primary care (12/2020)
2. Real world biologic use and switch patterns in severe asthma (**SUNNIE**)
3. Global access to severe asthma biologics (**BACS**)
4. Differences in asthma disease severity by socioeconomic status and ethnicity (**RADIANT**)
5. Descriptive Study of the Incidence of Malignancy in Severe Asthma Patients Receiving Benralizumab and Other Therapies, a Post Authorization Safety Study (**PASS**)
6. Is there a trough phenomenon with worsening asthma in the last week of a dosing interval for q monthly and bimonthly biologics? If present, which patient characteristics are associated with the phenomenon, and can it be shown objectively?
7. Should pulmonary function (the degree of bronchial obstruction) be considered a necessary component of "complete response" definition and, in consequence, should it be considered an independent therapeutic objective?
8. ConectAR - Collaborative research network: Advancing patient and public involvement in Respiratory and digital health
9. To evaluate inter-observer agreement in the choice of biologic therapy for severe asthma patients among severe asthma specialists, based on assessment of real-life clinical cases
10. Leveraging microbiome analysis in the assessment and management in patients with severe asthma
11. Microbiome-guided use of biologics in severe asthma patients

#### Effectiveness of Biologics:

1. Comparative effectiveness across severe asthma biologic classes (anti-IL5 vs anti-IgE) in patients eligible for both (**FIRE**)
2. Define responders and non-responders to biologics (**BEAM**)
3. Impact of initiating biologics in patients on long-term OCS or frequent rescue steroids (**GLITTER**)
4. Biologic patterns, clinical outcomes and health resource utilisation (**CLEAR**)
5. Describe clinical outcome before & after biologic treatment (**LUMINANT**)
6. Impact of comorbidity on response to biologics in severe asthma (**PRISM**)
7. What is the effectiveness of biologics (by classes) in patients with different combination of T2 biomarkers (**IGNITE**)

If you wish to submit a research question utilising ISAR data, you may do so via the **"submit a proposal or research request"** tab on ISAR website.

#### ISAR Website

The ISAR website has had a facelift. It now contains a new "Dissemination" tab for the latest news on ISAR abstracts and publications, and a "FAQ" tab which provides answers to frequently asked questions about ISAR.

[www.isaregistries.org](http://www.isaregistries.org)