

## Meet&Match.Dx 2022 Challenge #4

**Title of the challenge:** Disruptive solutions for early disease identification and interdisciplinary treatment of eosinophilic diseases

**Name of the Pharma/Medtech company:** GlaxoSmithKline GmbH & Co. KG

**Disease area:** Eosinophilic Diseases

### Description of the challenge:

#### **1. Short introduction about the disease or the problem.**

Eosinophil-driven diseases are inflammatory conditions associated with elevated levels of eosinophils, a type of white blood cell. Epidemiological, clinical, and pathophysiological studies strongly suggest that an increase in eosinophil are associated with a number of diseases and disease manifestations. For example a majority of patients (74-84%) with severe asthma (SA) have an eosinophilic phenotype (also called severe eosinophilic asthma or SEA) as determined by a routine blood test that measures eosinophil levels. Chronic rhinosinusitis with nasal polyps (CRSwNP) is a condition highly associated to eosinophilic infiltration in which patients develop soft tissue growths called nasal polyps which can cause chronic symptoms such as nasal obstruction, loss of smell and discharge. Hypereosinophilic syndrome (HES) and eosinophilic granulomatosis with polyangiitis (EGPA) are both potentially life-threatening rare diseases. Eosinophilic inflammation in various tissues can cause a range of symptoms which are frequently severe. Co-morbidities in eosinophilic driven diseases are common. Unifying for the patient pathways of above mentioned diseases are delays in diagnostics and inadequate treatments of severe disease. Main reasons for this being – difficulties in interdisciplinary exchanges (data transfer and knowledge exchange between physicians), lack of testing of blood or tissue eosinophils, missed symptoms due to time restrictions during anamnesis and lack of knowledge.

#### **2. Describe the current treatment/solution and its limitations.**

Severe asthma is defined as asthma which requires treatment with high dose inhaled corticosteroids (ICS) plus a second controller (and/or systemic corticosteroids) to prevent it from becoming 'uncontrolled' or which remains 'uncontrolled' despite this therapy. Severe asthma patients are also often categorised by long-term use of oral corticosteroids (OCS). Standard of care for HES and EGPA often includes oral corticosteroids (OCS) and/or cytotoxic immune therapies. For CRSwNP first line of therapy is usually intranasal corticosteroids and potentially surgical interventions. All indications might be treated with targeted therapy (e.g. IL-5 inhibition).

#### **3.1. Describe which kind of solution you are looking for:**

Tools supporting the accelerated diagnosis and increased awareness of patients with eosinophilic diseases.

### **3.2. Describe which kind of solution you are looking for (longer description):**

Immunological diseases often cause multi organ participation, which lead to tedious patient pathways, often lacking effective interdisciplinary approaches. GSK is calling for disruptive, innovative solutions that can be applied to improve the early disease identification and hence treatment, for patients suffering from eosinophilic diseases.

Solutions could address but are not limited to:

- Enabling of multidisciplinary interconnection to fasten patient pathways and therefore diagnosis.
- Diagnostic devices and/or tools to support HCPs and patients in earlier diagnosis.
- Decentralized metaverse or digital platforms to facilitate diagnosis, treatment and others.

Easy integration in daily clinical workflow is an essential prerequisite. The solution needs to be validated with an end user (HCP), needs to have data to support evidence and impact and has all required approvals.

### **4. Target group:**

Main target group will be clinicians working in the field of pulmonology, rheumatology and ENT. Solutions also being applicable to office based practitioners and GPs will be preferred.