Efficacy assessment and key predictors of therapeutic response to biological treatment of severe asthma.

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INTRODUCTION

- Severe asthma is a heterogeneous disease with distinct clinical phenotypes and different molecular immune mechanisms underlying inflammation. This is one of the reasons for the variable therapeutic effect of biological treatment. It also reduces the benefit - risk balance of inhaled corticosteroids
- The choice of the specific biological therapy depends on the phenotype and endotype of the disease, which results from the selective blocking of inflammatory pathways by these drugs. Even though several biomarkers have been explored in asthmatic patients with T2 severe asthma, there is still a gap in their feasibility in clinical practice and there is a lack of data on their ability to predict treatment response.
- Establishing key prognostic factors determining the effectiveness of biological therapy remains a key unmet need in modern personalized medicine.

METHODS

1. **Recruiting and following a real cohort of severe asthma patients eligible for referral to biological therapy under the available Polish therapeutic program.**
2. **The current number of patients enrolled in the study - 6**

3. Observation from the beginning of biological treatment and at 24 weeks of treatment

4. Determine responders and non-responders

5. Identification and characterization of demographic, clinical and biomarker profiles related to response or non-response to biological treatment of severe asthma.

3TR-ABC ASTHMA BIOLOGICS COHORT

Baseline (week 0)	+24 week
Standard examination package: • Informed consent • Demographics • Medication status • PROs • Lung function • FeNO • Blood • Urine	**Standard examination package:** • Informed consent • Demographics • Medication status • PROs • Lung function • FeNO • Blood • Urine

The planned study group - 30 people each qualified for biological treatment with mepolizumab, and benralizumab. The collection of research material will take 2.5 years, another year is envisaged for the preparation of results and writing publications.

Current research reports

Clinical profiles of patients referred for biological therapy and major limitations in the qualification paths in a specialist asthma centre

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Definition of disease remission

- EOS <300 cells/µL
- No need for oral corticosteroids
- Zero exacerbations requiring OCS and hospitalizations
- ACQ <1,5
- FEV1 improvement ≥100 mL.

Disease remission in patients with severe asthma after 2 years of treatment with mepolizumab (n=47)