Respiratory Effectiveness Group

Advances in real-life respiratory research

March 2026
WORKING GROUP MEETING AGENDA: Biomarkers in Severe Asthma

Meeting details	
Location	Melia Palma Marina Hotel + MS Teams
Meeting date	19.03.2026
Meeting time	17:30
Chair(s)	Dermot Ryan
Attendees	Gabriela Ispas (Chiesi) Rory Chan Femerelo Roman (TEVA) Reshed Abohalaka Todor Popov PioTrkuna Alan Kaplan Jana Bosiers Katerina Antoniu Emmanouil Syanvoulakis Therese Lapperre Ron Dandurand Ceri Banks Valeria Perugini
Objectives	
1	Welcome and Introduction
2	General Discussion and OAB
3	Final Remarks

Items	
Welcome and Introduction	The meeting was opened by Dermot, who kindly chaired the session in the absence of the planned chair. He welcomed the group and noted the importance of biomarkers in severe asthma, highlighting their role in improving disease identification, patient stratification, and treatment selection. He acknowledged that, despite progress in the field, there remains a need to move beyond established biomarkers and to explore new approaches that can better support personalised care and clinical decision-making.

General discussion and OAB	The discussion began with a focus on mucus plugging, which was recognised as an increasingly relevant biomarker in both asthma and COPD. WG noted that, while CT imaging is frequently used in clinical practice, the assessment of mucus plugging remains inconsistent and largely dependent on subjective interpretation. There was agreement that the lack of standardised definitions, scoring systems, and reporting approaches represents a key limitation. The potential role of artificial intelligence and automated image analysis tools was highlighted as a promising avenue to enable objective and reproducible quantification. It was also suggested that combining datasets across centres could help improve understanding of mucus plugging prevalence, distribution, and clinical relevance, particularly given that many groups currently work with relatively small cohorts. The relationship between mucus plugging and small airways disease was also discussed, with some uncertainty remaining as to whether these represent overlapping or distinct processes. While advanced imaging techniques, including ultra-high-resolution CT and micro-CT, can provide valuable insights, their limited availability restricts their use in routine clinical practice. As such, there was recognition of the need for more pragmatic approaches that can be applied across larger, real-world datasets. Although mucous plugging is an emerging bio-marker, the reality is that Small Airways Disease (SAD) is an accepted treatable trait. It is identified through the performance of oscillometry. Wide-scale adoption has been inhibited once again by disparate standards of interpretation but it seems that consensus standards are now close to being accepted. They should be considered and essential component of the difficult to control/ severe asthma patient. A recurring theme throughout the discussion was the need to move towards more objective, scalable, and clinically applicable biomarker tools. WG emphasised the importance of reducing subjectivity in measurement and highlighted the potential of integrating imaging, physiological, and clinical data to develop more robust biomarker frameworks. The use of existing datasets for retrospective analyses was also considered an important opportunity to accelerate progress. The conversation then shifted towards the identification of patients at risk of progressing to severe asthma. It was noted that combining markers such as blood eosinophils, FeNO, and lung function measures may provide a more comprehensive assessment of risk. There was discussion around the current definitions of severe asthma and the possibility that these may delay earlier intervention. In this context, emerging research exploring the earlier use of biologics in high-risk patients was highlighted as an important area of interest, although challenges remain in translating these approaches into routine clinical practice, particularly in primary care. The importance of assessing biomarkers during exacerbations rather than in stable disease was also emphasised. WG noted that many biomarkers may be suppressed or normalised following treatment, potentially leading to misinterpretation if measured at the wrong time. There was interest in the concept of biomarker-

	guided treatment during exacerbations, particularly to reduce unnecessary exposure to corticosteroids. Early data suggest that combining inflammatory and physiological markers may help better characterise exacerbation phenotypes and guide treatment decisions. Several additional areas were explored as part of a broader discussion on future directions. These included the potential role of novel blood biomarkers, such as p-Tau, although this remains highly exploratory at present. The microbiome and genetic profiling were also highlighted as promising but underdeveloped areas in respiratory research. Hormonal influences, including menopause and pregnancy, were discussed as potential modifiers of asthma severity, while emerging evidence around GLP-1 agonists suggested possible links between metabolic pathways and respiratory outcomes. These areas were recognised as important but still at an early stage of investigation. Overall, the discussion highlighted the complexity of biomarker research in severe asthma and the need for a more integrated and standardised approach. There was clear agreement that greater collaboration across centres and disciplines will be essential to advance the field. The importance of bridging the gap between research findings and clinical implementation was also emphasised, alongside the need to develop tools that are both scientifically robust and practically applicable in routine care.
Final Remarks	The meeting concluded with Dermot thanking all attendees for their valuable contributions and engagement. He noted that the discussion had generated a wide range of ideas and highlighted several important areas for future research.