Personalized Care in COPD: Endotyping and Biologic Integration in Clinical Practice

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Educational background

2006-2010	Ph.D., Graduate School, Hanyang University College of Medicine, Seoul, Republic of Korea
2004-2005	M.A., Graduate School, Hanyang University College of Medicine, Seoul, Republic of Korea
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Professional experience

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2022-2024	Professor, Division of Pulmonology and Critical Care Medicine, Department of Internal Medicine, Hanyang University Guri Hospital, Hanyang University College of Medicine, Guri, Republic of Korea
2017-2018	Visiting Scholar, Centre for Heart Lung Innovation, University of British Columbia, Vancouver, Canada
2012-2022	Assistant/Associate Professor, Division of Pulmonology and Critical Care Medicine, Department of Internal Medicine, Hanyang University Guri Hospital, Hanyang University College of Medicine, Guri, Republic of Korea
2010-2012	Attending Physician, Division of Pulmonology, Department of Internal Medicine, Hanil General Hospital, KEPCO Medical Foundation, Seoul, Republic of Korea

The management of Chronic Obstructive Pulmonary Disease (COPD) is undergoing a paradigm shift from generalized guidelines to personalized care. Building on foundational discussions of inflammation and novel biologics, this presentation addresses the critical challenge of translating advanced science into practical, real-world clinical application.

As a practical guide, we will explore pragmatic strategies for endotyping using accessible biomarkers like blood eosinophil counts and FeNO. The goal is to move beyond broad phenotypes and identify specific inflammatory signatures, such as Type 2 inflammation, to select patients most likely to respond to targeted biologic interventions.

Crucially, our discussion will be grounded in the unique context of Korean COPD patients, analyzing domestic cohort data to highlight distinct clinical and inflammatory profiles. A step-by-step clinical workflow will be delineated, covering patient selection for biologics, treatment matching based on endotype, and subsequent monitoring. This provides a clear framework for integrating these novel treatments with existing management paradigms like the GOLD guidelines.

Ultimately, this presentation aims to equip clinicians with a practical algorithm and the confidence to implement a true precision medicine approach, ensuring the right treatment is delivered to the right patient at the right time for improved outcomes.