

Mepolizumab Reduces Systemic Corticosteroid Exposure in Patients With COPD and Type 2 Inflammation

GLENVIEW, IL (October 12, 2026)– Mepolizumab reduced total yearly systemic corticosteroid (SCS) exposure, particularly high-dose courses, among patients with chronic obstructive pulmonary disease (COPD) and type 2 inflammation receiving inhaled triple therapy.

Treatment guidelines recommend SCS for COPD exacerbations. However, SCS are associated with complications in patients with COPD, highlighting a need for targeted treatments that can reduce SCS burden. Mepolizumab, a humanized monoclonal antibody that specifically targets interleukin-5, is an approved add-on maintenance therapy in patients with COPD and an eosinophilic phenotype.

Researchers conducted a pooled analysis of data from three Phase III, randomized, placebo-controlled trials: METREX, METREO, and MATINEE. Eligible patients were aged 40 years or older, had a COPD diagnosis for at least one year, were receiving inhaled triple therapy, had a history of exacerbations and had no current diagnosis of asthma. Patients received mepolizumab 100 mg subcutaneously or placebo every four weeks. The analysis examined the percentage of days receiving SCS and total SCS exposure for any cause.

Among 2,089 patients enrolled, 1,713 had blood eosinophil counts (BEC) ≥ 150 cells/ μ L and 1,144 had BEC ≥ 300 cells/ μ L. For patients with BEC ≥ 150 cells/ μ L, mean total SCS exposure was 434.64 mg/year with mepolizumab compared with 609.95 mg/year with placebo. Among patients with BEC ≥ 300 cells/ μ L, mean total exposure was 354.28 mg/year with mepolizumab compared with 551.52 mg/year with placebo. Mepolizumab-treated patients also spent fewer days receiving high-dose SCS compared with patients receiving placebo.

“Mepolizumab can serve as an add-on to inhaled triple therapy and may reduce SCS burden in COPD, particularly complications associated with short-term high-dose courses, across a wide spectrum of screening BEC levels,” said Nicola Hanania, MD, MS, FCCP, lead author and CHEST 2026 presenter.

The findings demonstrate that mepolizumab reduced total yearly exposure to SCS compared with placebo, particularly high-dose courses, among patients with COPD across the screening blood eosinophil count levels analyzed.

Further results will be presented at the CHEST Annual Meeting 2026 as part of the Precision COPD: Type 2 Inflammation, Biomarkers, and Targeted Therapy rapid fire original investigation presentations titled, *Mepolizumab Reduces Systemic Corticosteroid Utilization*

in COPD With Type 2 Inflammation: Pooled Results From Phase 3 Randomized Trials. The [study abstract](#) can be viewed on the *CHEST*[®] journal website.