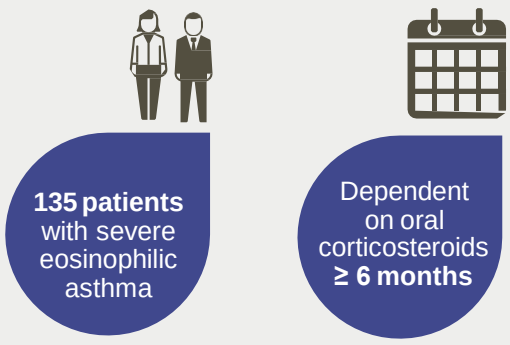
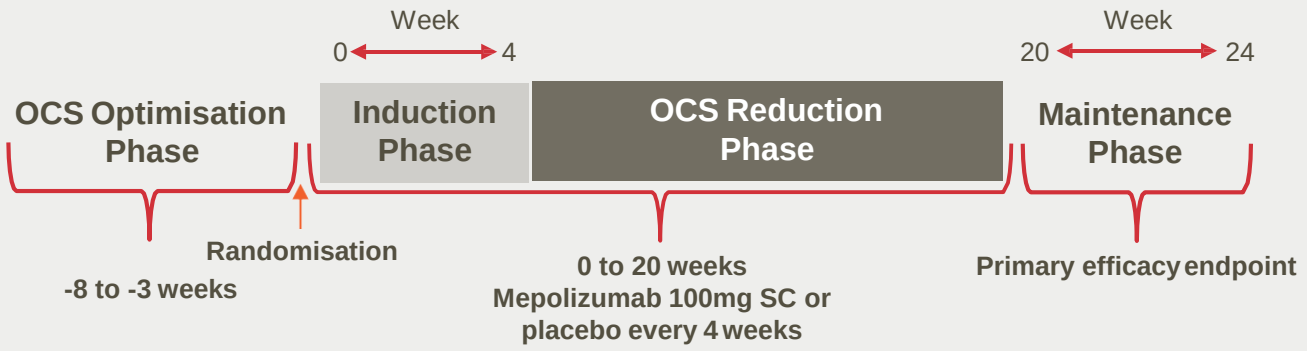
The Effect of Mepolizumab on Reduction in Oral Corticosteroid Use and Durability of Effect

Mepolizumab (100mg SC Q4W) is approved for use in patients aged 6 years and older with severe eosinophilic asthma[1] and has been shown to reduce the need for daily OCS use compared with placebo.[2]

SIRIUS: Placebo-controlled, Phase III, oral corticosteroid (OCS) reduction study[2]

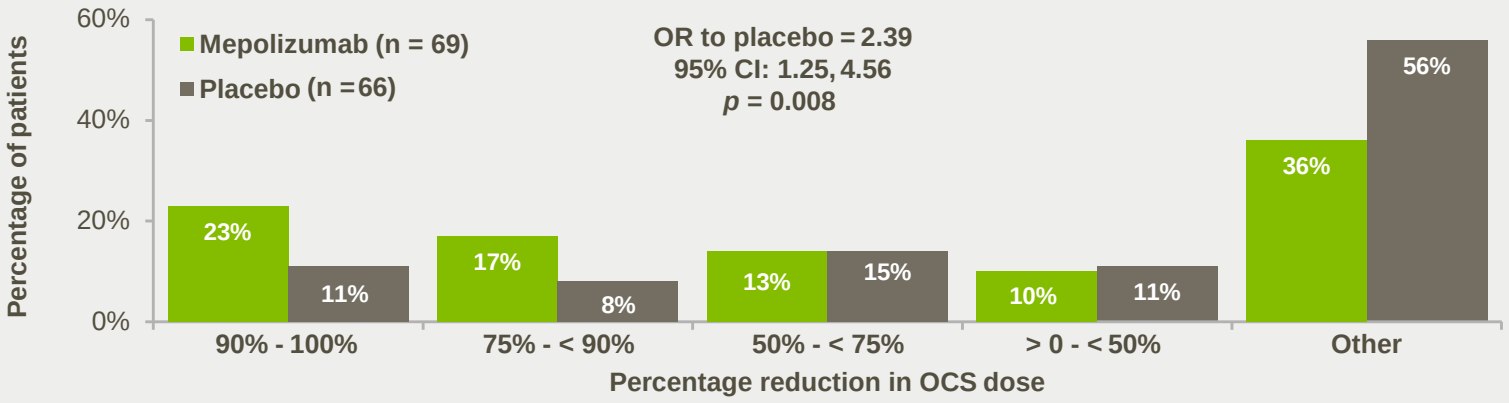
Evaluated the effects of mepolizumab as add-on therapy in reducing the use of oral corticosteroids while maintaining asthma control





SIRIUS Primary endpoint: Weeks 20–24 percentage reduction of OCS dose while maintaining asthma control[2]

Patients receiving mepolizumab achieved significantly greater reductions in maintenance OCS doses from baseline during Weeks 20–24, while maintaining asthma control, compared with placebo.

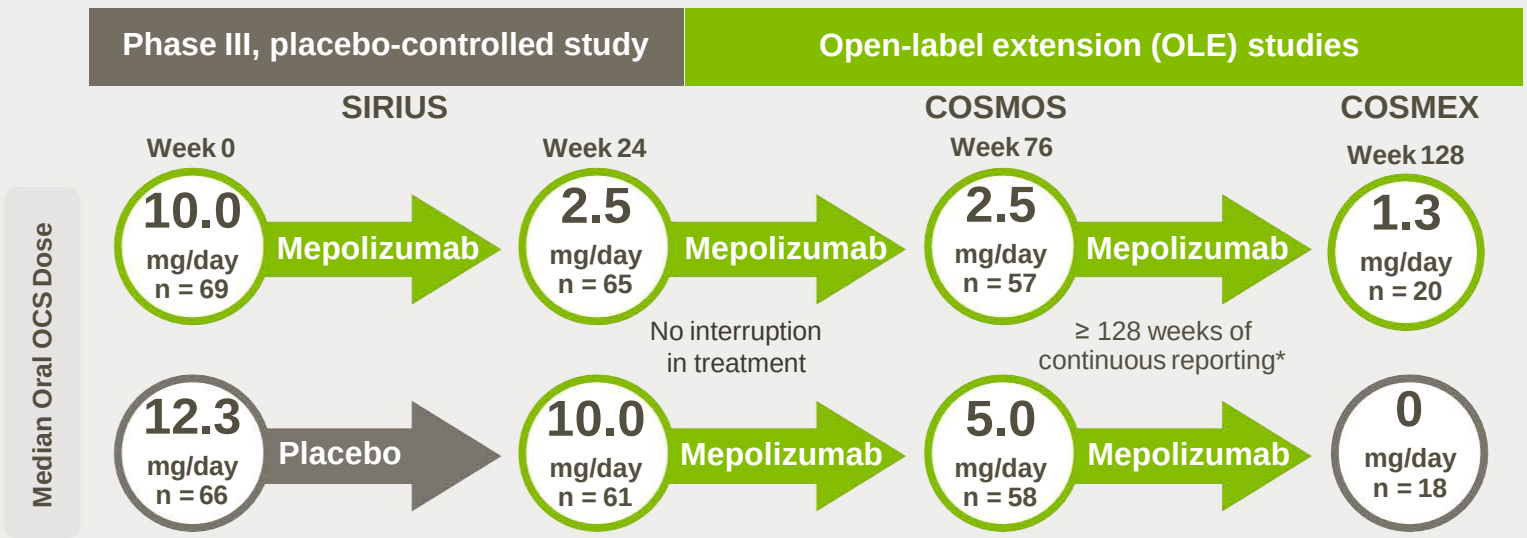


"Other" included those patients who had no decrease in OCS, failed to maintain asthma control or withdrew from treatment.

COSMOS and COSMEX: Open-label extension studies evaluating, in a post hoc analysis, the durability of OCS reduction in patients receiving mepolizumab[2-4]

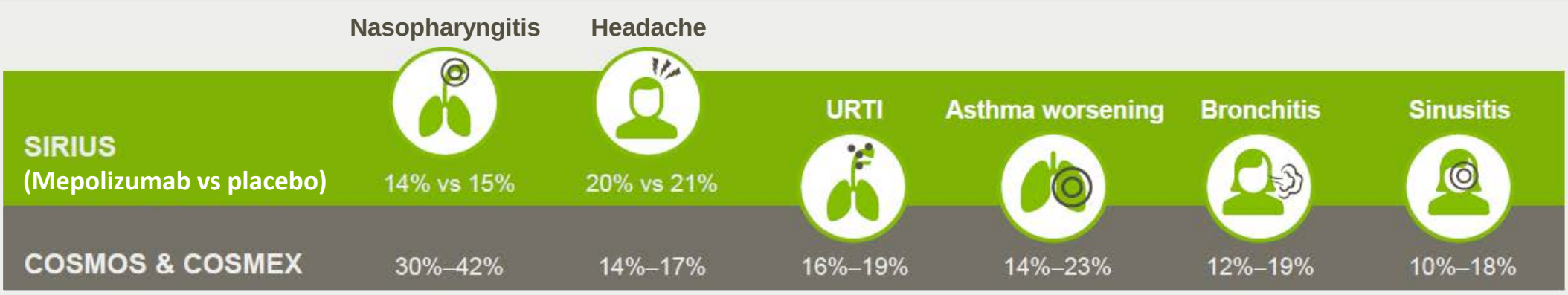
COSMOS[3]: 52-week study included patients completing SIRIUS (n = 126)

COSMEX[4,†]: Up to 172-week study included patients treated in COSMOS who had life-threatening or seriously debilitating asthma (n = 73)



* 38 of 73 patients had a ≤ 12-week gap in treatment between COSMOS and COSMEX.
† The COSMEX study enrolled a subset of patients from COSMOS with a history of life-threatening or seriously debilitating asthma who had previously demonstrated clinical benefit from mepolizumabtreatment.

Safety: Most frequently reported AEs (≥ 15%) during treatment in any patient group[2-4]



Abbreviations: AE, adverse event; CI, confidence interval; OCS, oral corticosteroid; OR, odds ratio; SC, subcutaneous; URTI, upper respiratory tract infection.

References: 1. GlaxoSmithKline Inc. Mepolizumab (NUCALA) Health Canada Product Monograph. March 12, 2020. Available at: gsk.ca/nucala/en; 2. Bel EH, et al. *N Engl J Med.* 2014;371:1189-1197; 3. Lugogo N, et al. *Clin Ther*. 2016;38:2058-2070.e1; 4. Khurana S, et al. *Clin Ther*. 2019;41:2041-2056.e5.

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