## 1.30 Real world experience of adrenal insufficiency in patients receiving anti-IL-5 biologic therapy

<sup>1</sup>Dr. Rory O'Loghlin, <sup>1</sup>Ms. Theresa Frawley, <sup>1</sup>Una Cannon-Fahy, <sup>1</sup>Michael Harrison, <sup>1</sup>Ruth Cusack <sup>1</sup>Department of Respiratory Medicine, Galway University Hospital, Galway, Ireland

Background: Anti-interleukin (IL)-5 biologics are effective in the treatment of uncontrolled eosinophilic asthma, EGPA, or HES resulting in recurrent or chronic oral corticosteroid (OCS) treatment (1). For OCS-dependent patients, their ability to discontinue OCS post-initiation of biologics can be complicated by glucocorticoid-induced adrenal insufficiency (AI) (2), the risk of which increases with higher doses and longer OCS treatment durations (3). Methods: We completed a retrospective chart review of 54 patients with severe asthma, EGPA, or HES who received an anti-IL5/-IL5R between 2019 and 2022 to assess: 1) the burden of chronic OCS use; and 2) the prevalence of AI using the short synacthen test (SST). Results: 54 patients were identified, 44 (81%) of whom were OCS-dependent prior to anti-IL5/-IL5R commencement. 22 (50%) successfully discontinued, while 15 (27%) achieved a reduction in their maintenance OCS dose. 26 (48%) were investigated for AI via SST, with 20 (77%) achieving a peak serum cortisol rise of <450nmol/L, indicative of AI. 6 of these 20 (30%) have subsequently successfully discontinued OCS, while the remaining 14 (70%) remain OCS-dependent. Conclusions: AI is prevalent among this patient population, with the rate of AI in keeping with rates seen in similar studies from other European centers (4). Identification is critical to avoid adrenal crises.

**Keywords:** Asthma, EGPA, Hypereosinophilic syndrome, oral corticosteroids, adrenal insufficiency, anti-IL5/-IL5R monoclonal antibodies **Conflict of Interest:** The authors declare that they have no conflict of interest.

## **References:**

- 1. Health improvement Scotland. BTS/SIGN British Guideline for the management of asthma. 2016. SIGN 153.
- 2. Bel EH, Wenzel SE, Thompson PJ, Prazma CM, Keene ON, Yancey SW, et al. Oral glucocorticoid-sparing effect of mepolizumab in eosinophilic asthma. New England Journal of Medicine 2014;371(13): 1189-97
- 3. Broersen LH, Pereira AM, Jørgensen JO & Dekkers OM. Adrenal Insufficiency in Corticosteroids Use: Systematic Review and Meta-Analysis. J Clin Endocrinol Metab 2015 100 2171-2180
- 4. Nanzer AM, Chowdhury A, Raheem A, et al. Prevalence and recovery of adrenal insufficiency in steroid-dependent asthma patients receiving biologic therapy. Eur Respir J 2020; 56: 1902273 [https://doi.org/10.1183/13993003.02273-2019]