Healthcare resource utilisation and associated costs in patients with eosinophilic granulomatosis with polyangiitis (EGPA) in England: a retrospective observational cohort study

Salman H. Siddiqui¹, Paul Dolin², Anat Shavit², Jennifer Rowell³, Chris Edmonds⁴, Danuta Kielar², Josefine Persson^{5*}, Alessandra Lacetera⁶, Pablo Suárez-Sánchez⁶, Cono Ariti⁶, Bélène Podmore⁶, Alvaro Kitchin Velarde⁶, Stephanie Y. Chen⁷



¹National Heart and Lung Institute, NIHR Imperial Biomedical Research Centre, Imperial College London, UK; ²BioPharmaceuticals Medical, AstraZeneca, Cambridge, UK; ³Market Access and Pricing, AstraZeneca, Cambridge, UK; ⁴Market Access and Pricing, AstraZeneca, Gaithersburg, USA; ⁵Market Access and Pricing, AstraZeneca, Gothenburg, Sweden; ⁶OXON Epidemiology, Madrid, Spain; ⁷BioPharmaceuticals Medical, AstraZeneca, Gaithersburg, MD, USA

Poster number: EE428

Why did we perform this research?

EGPA is a rare, inflammatory disorder characterised by asthma, eosinophilia and systemic necrotising vasculitis of small- to medium-sized blood vessels^{1,2}



 Although the incidence of EGPA is low, the clinical burden associated with the disease and its management is high^{3,4} More real-world data on patient characteristics, HCRU

and health insurer payment costs in patients with EGPA

are needed to help ascertain the full impact of the disease



Objective

This retrospective observational cohort analysis aimed to quantify HCRU and associated costs using electronic health record databases in England



E-poster Supplementary material

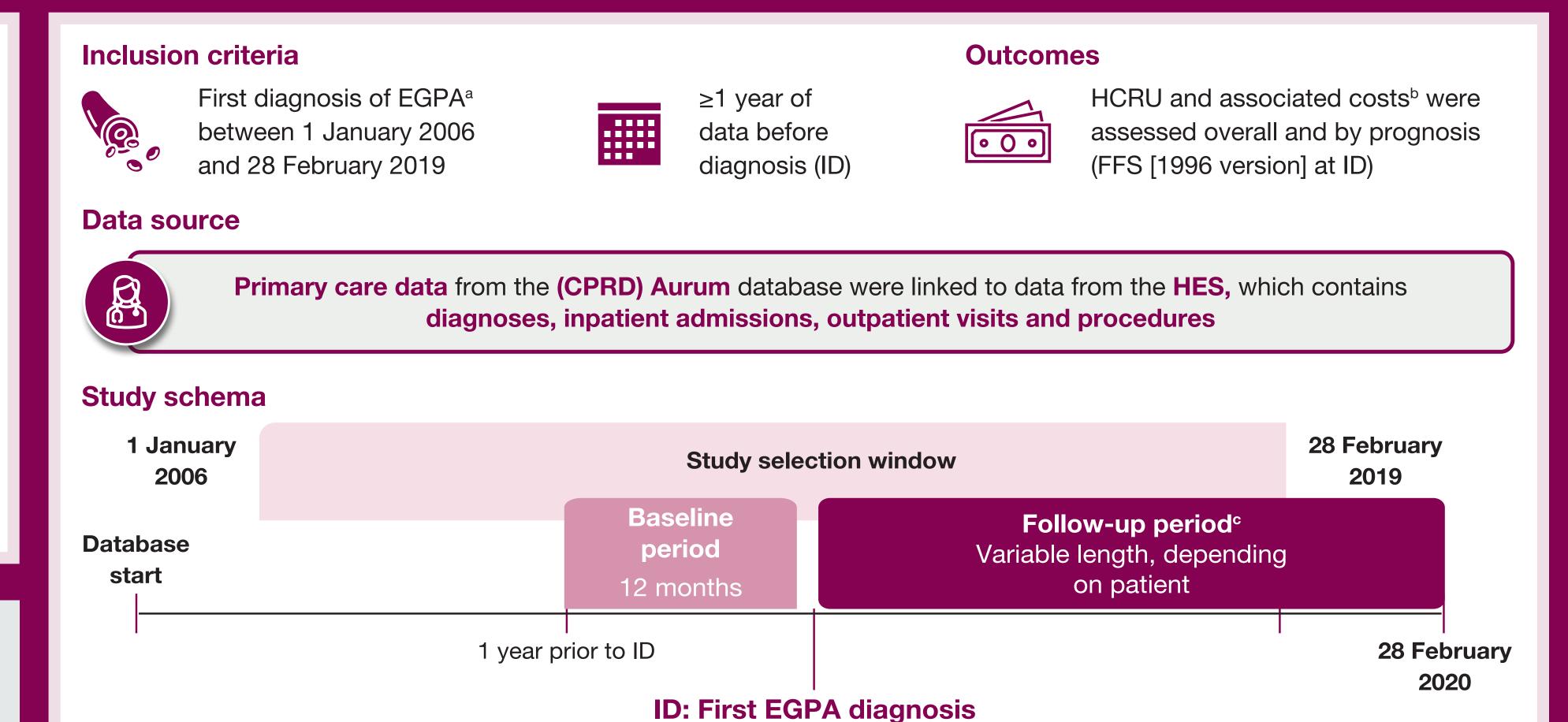
Scan QR code to obtain a copy of these materials.

Materials obtained through this QR code are for personal use only and may not be reproduced without permission from the authors of this poster.

*Corresponding author email address: josefine.persson1@astrazeneca.com Presented by: Kerry Gairy

Poster presented at The Professional Society for Health Economics and Outcomes Research (ISPOR) Europe Conference 2024, 17-20 November, Barcelona, Spain

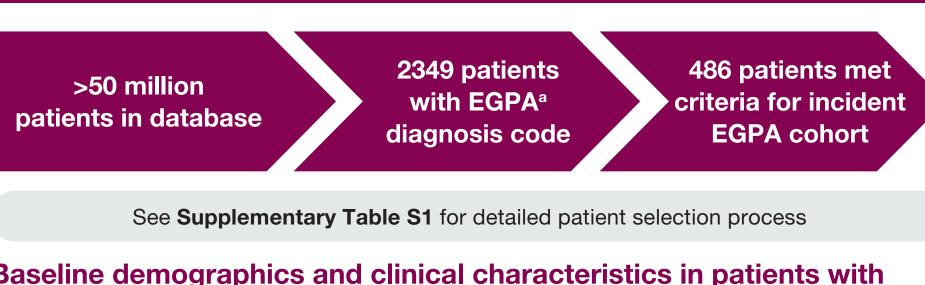
How did we perform this research?



This study forms part of the CONSTELLATION real-world evidence programme in rare, eosinophil-associated diseases

SCTID 82275008 or ICD-10 M30.1, identified from CPRD Aurum or hospital records; Dobtained from 2021/2022 national schedules of NHS costs; °Follow-up was from ID to death, deregistration, last GP data collection or study end

What did we find?

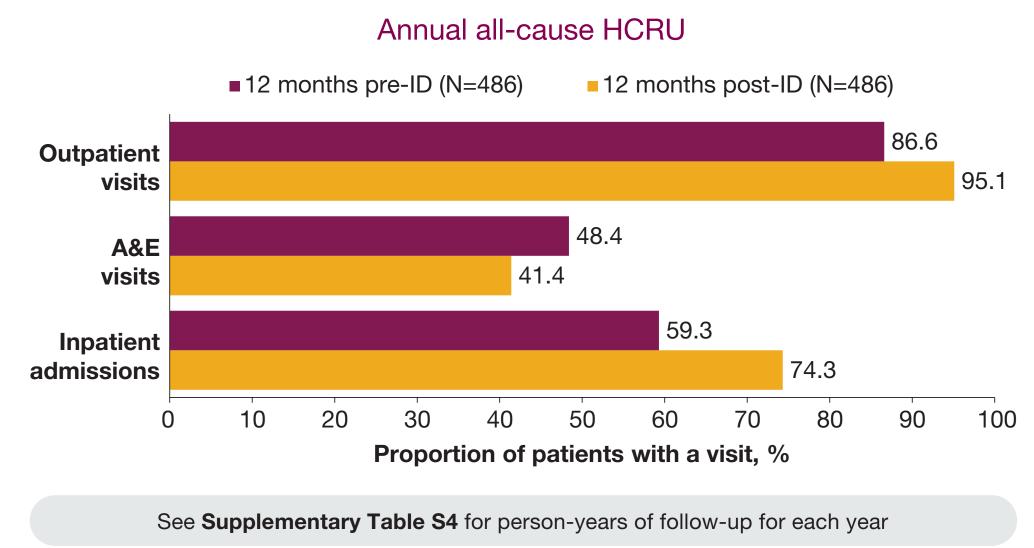


Baseline demographics and clinical characteristics in patients with incident EGPA (N=486)

See Supplementary Table S2 for further demographics and clinical characteristics

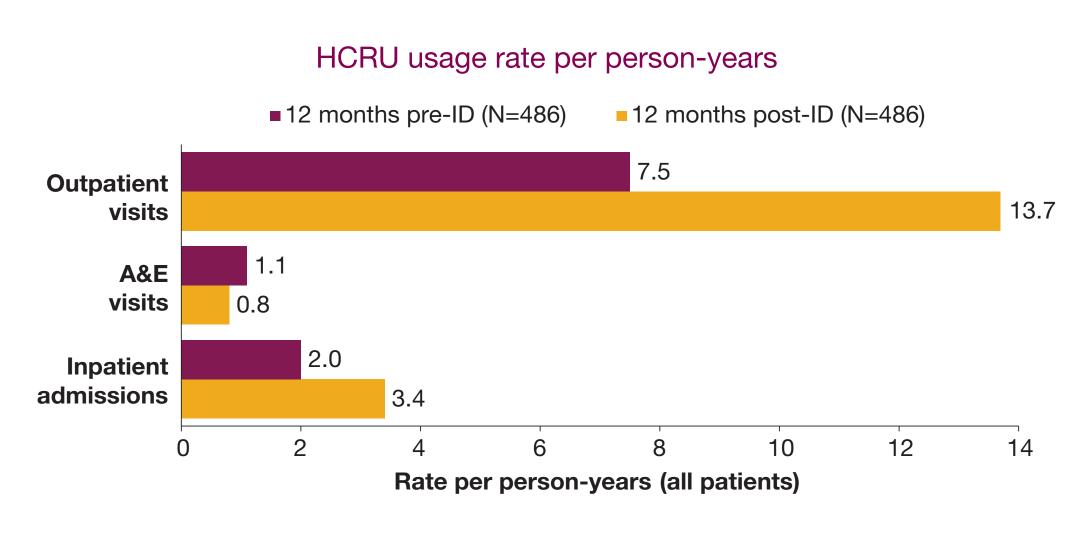
FFS (1996 version)⁵ at ID, n (%) 371 (76.3) 99 (20.4) 16 (3.3)

See Supplementary Table S3 for FFS components^b 008 or ICD-10 M30.1, identified from CPRD Aurum or hospital records; bFFS is a prognostic tool that predicts mortality in EGPA and was developed All-cause HCRU was generally greater post-ID than in the 12 months pre-ID, including outpatient visits (95.1%) and inpatient admissions (74.3%)



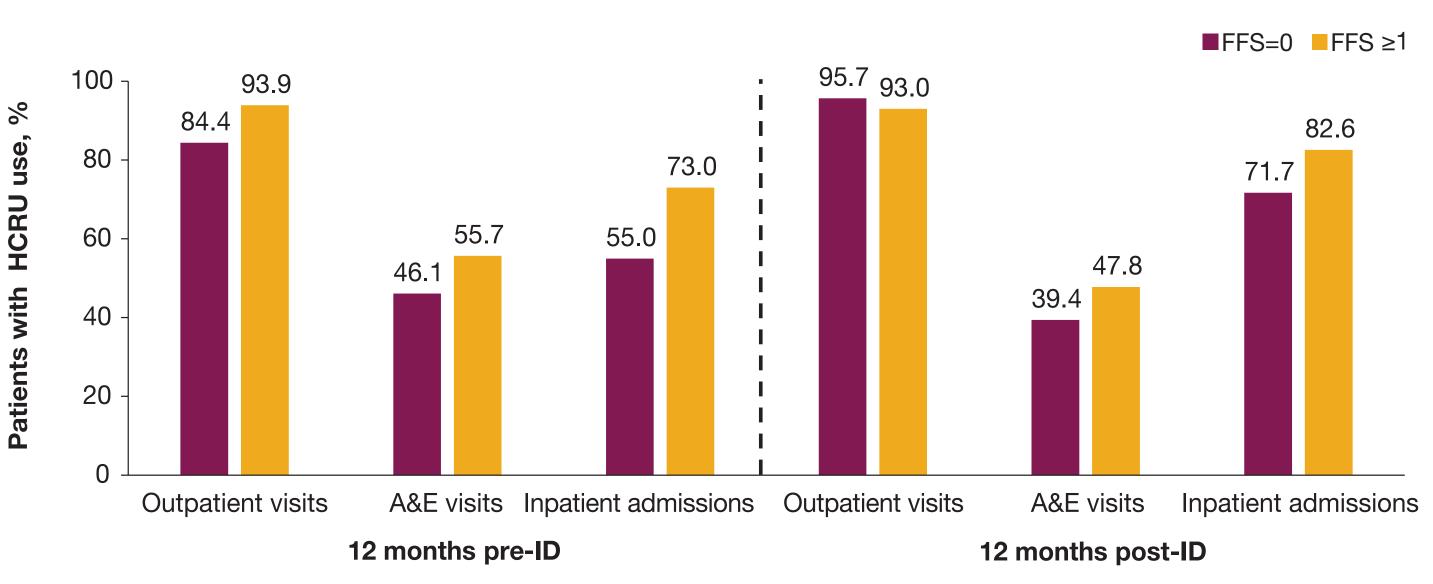
The median length of stay for admissions ≥1 day was 5.0 days pre-ID and 7.0 days post-ID

Rates of outpatient visits and inpatient admissions were greater in the 12 months post-ID compared with pre-ID

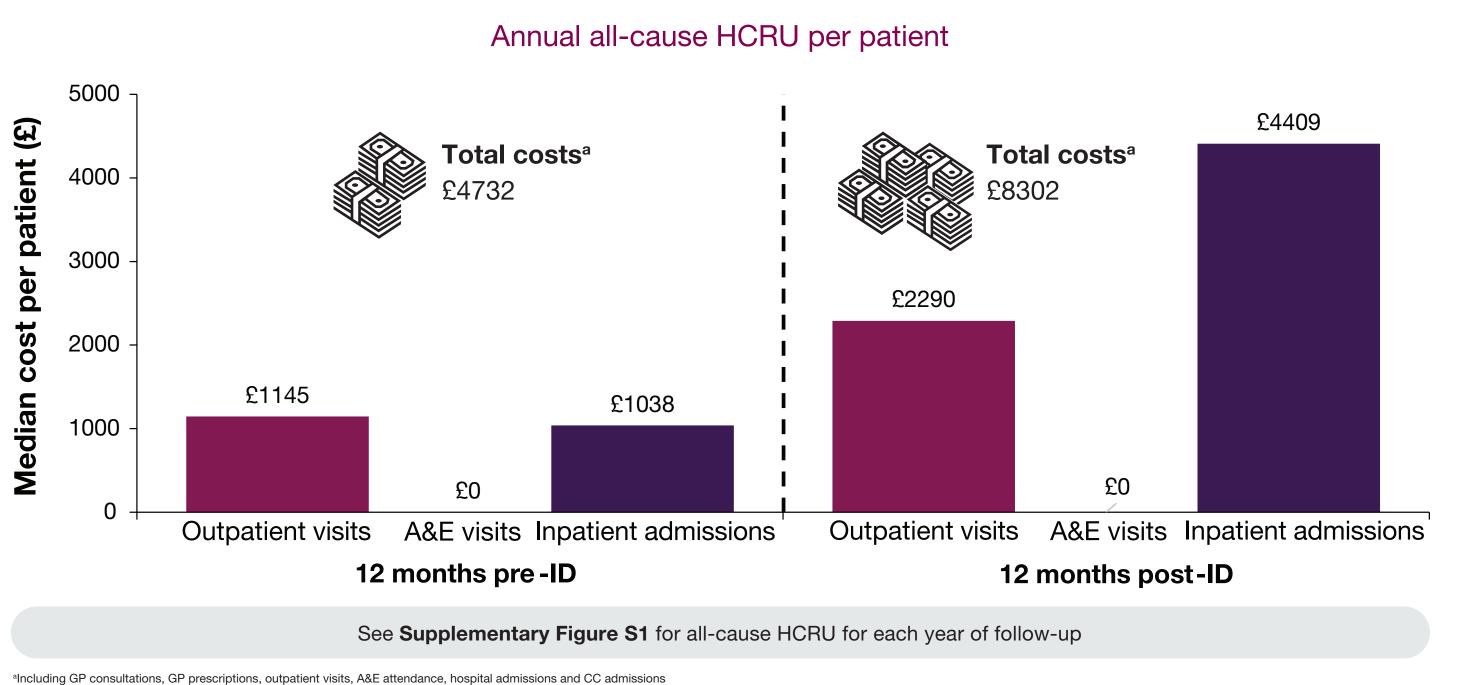


All-cause HCRU was high for all patients, regardless of FFS at baseline

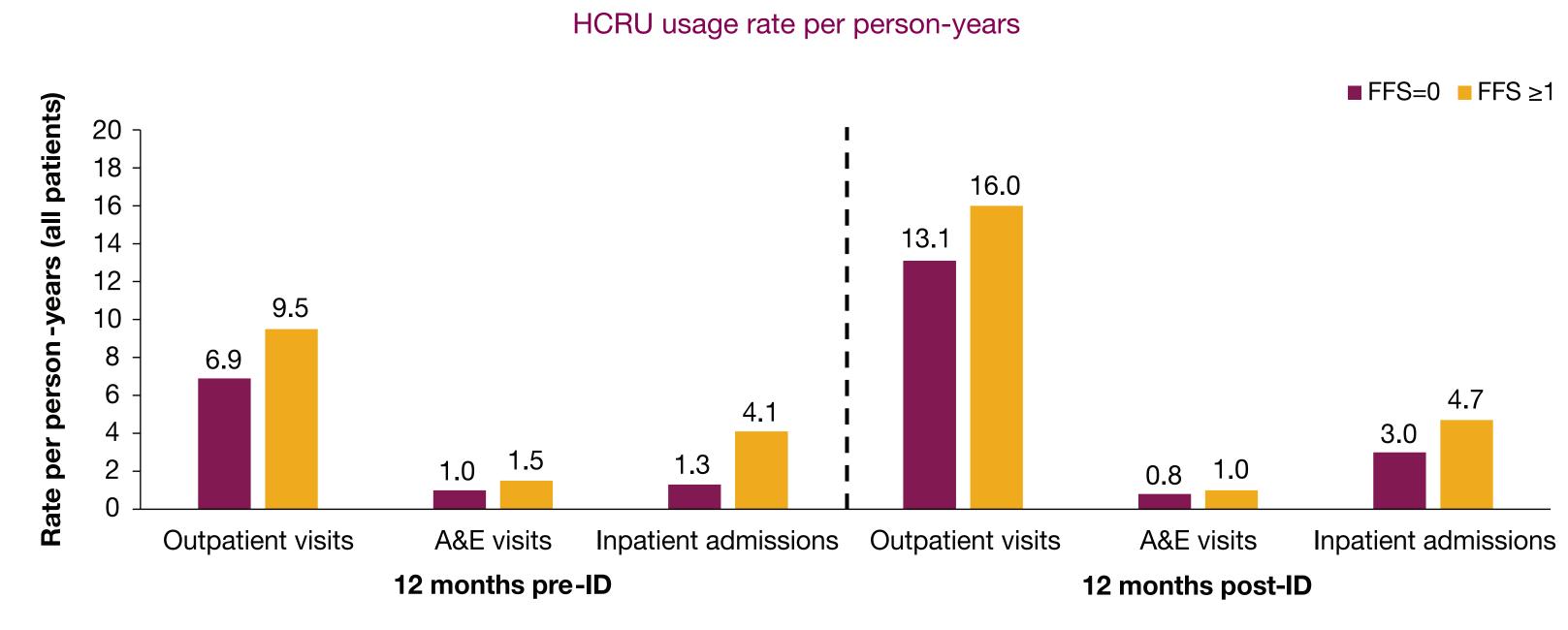
All-cause HCRU



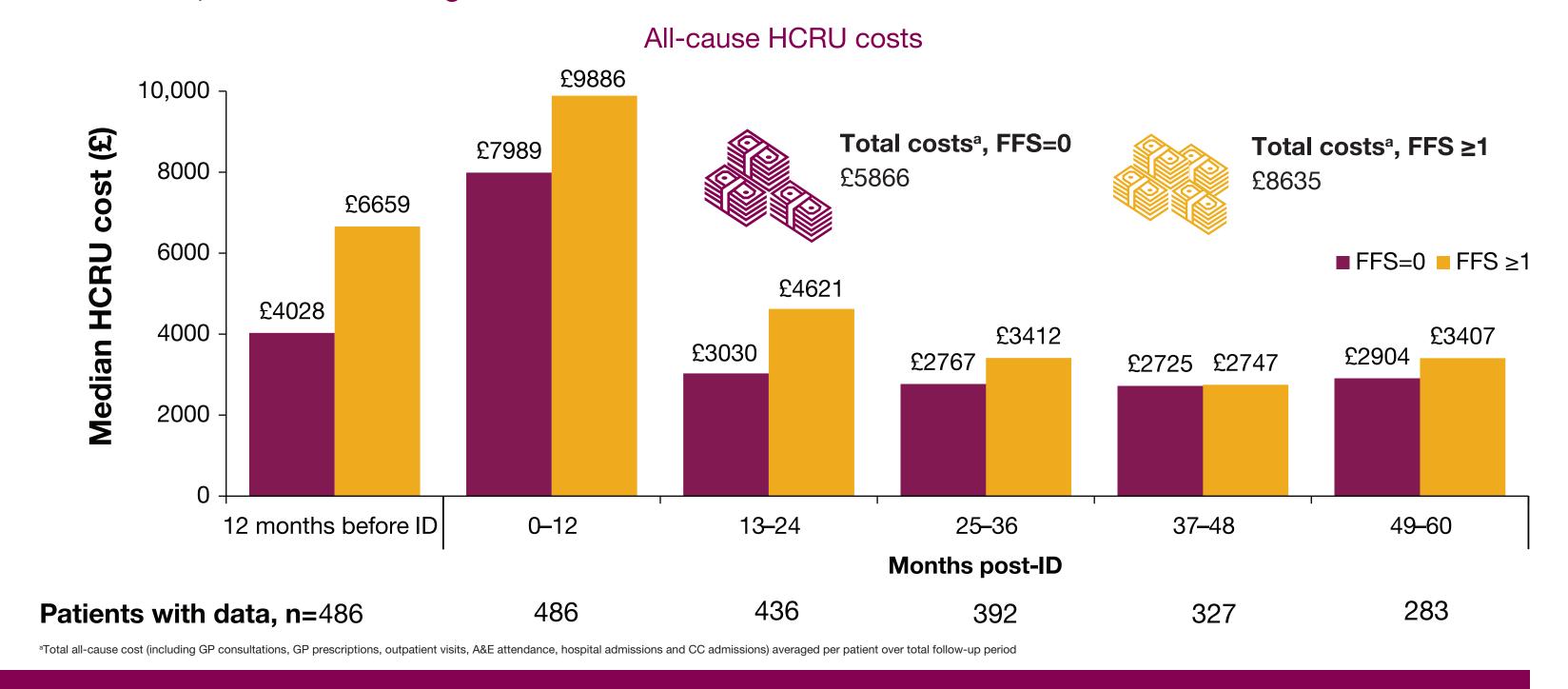
The median all-cause HCRU cost per person was greater during the 12 months post-ID compared with 12 months pre-ID



Rates of HCRU usage in the 12 months pre- and post-ID were high for all patients, regardless of FFS at baseline



The median all-cause costs per person were higher in patients with FFS ≥1 compared with FFS=0 from baseline to Month 24, and costs converged from Month 24 onwards



Conclusions

- EGPA was associated with high HCRU and direct medical costs in the year before and after diagnosis; median costs were higher for patients with an FFS ≥1 (£8635) compared with an FFS=0 (£5866) HCRU and the associated costs decreased 2 years after diagnosis and remained stable up to Year 5
- There is a high, unmet need for targeted treatments to improve the burden of EGPA and related HCRU and costs, which last for several years following EGPA diagnosis

References

1. Fijolek J. Radzikowska E. Front Med 2023;10:1145257 2. Grayson PC, et al. Ann Rheum Dis 2022;81(3):309-314. **3.** Bell CF, et al. *J Manag Care Spec Pharm* 2021;27:1249–1259. **4.** Jakes RW, et al. *Clin Rheumatol* 2021;40:4829–4836. **5.** Guillevin L, et al. *Medicine* 1996;75:17–28.

Abbreviations

A&E, Accident and Emergency; CC, critical care; CPRD, Clinical Practice Research Datalink; **EGPA**, eosinophilic granulomatosis with polyangiitis; **FFS**, Five Factor Score; **GP**, general practitioner; HCRU, healthcare resource utilisation; HES, Hospital Episode Statistics; ICD-10, International Classification of Diseases, Tenth Revision; ID, index date; NHS, National Health Service; SCTID, SNOMED CT [Systemized Nomenclature of Medicine Clinical Terms] identifier; SD, standard deviation

Acknowledgements

This study was funded by AstraZeneca. Medical writing support was provided by Hannah Talbot and Helen Brereton of inScience Communications, Springer Healthcare Ltd, UK, which was funded by AstraZeneca in accordance with Good Publication Practice 2022 guidelines.

Disclosures

SHS has received speaker fees from GSK, AstraZeneca, Chiesi, Boehringer Ingelheim and Novartis; participates on advisory boards for GSK, AstraZeneca, Chiesi, Boehringer Ingelheim, Novartis, Knopp Biotech, Munipharma, ERT Medical and Owlstone Medical; is a member of the European Respiratory Society Science Council and the UK Medical Research Council; and is a cofounder of Eupnoos Ltd. PD, AS, JR, CE, DK, JP and SYC are or were employees of AstraZeneca at the time of study conduct and may own stock/stock options. AL, PS-S, CA, BP and AKV are employees of OXON Epidemiology, which received funding from AstraZeneca to conduct the study.