Optimizing Treatment Pathways for nAMD Balancing Durability and Costs in the UK

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INTRODUCTION

 Neovascular age-related macular degeneration (nAMD) is a widespread cause of visual impairment, with intravitreal antivascular endothelial growth factor (anti-VEGF) agents being effective treatments¹

RESULTS

The analysis shows that for budget neutrality with ranibizumab biosimilars or potential aflibercept 2mg biosimilars, respectively, the number of injections of faricimab and aflibercept 8mg would need to be reduced as follows:

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 In the United Kingdom, patients receive ranibizumab, its biosimilars, aflibercept 2mg, brolucizumab, the more recently approved faricimab, or aflibercept 8mg.¹ These latter two therapies demonstrated longer durability in clinical trials and may lead to fewer injections in clinical practice^{2,3}

OBJECTIVE

This study investigated whether the higher acquisition costs of faricimab or aflibercept 8mg compared to biosimilars are offset by the potential reduced healthcare resource use associated with fewer injections

METHODS

• A durability model was developed based on equivalent clinical

Figure 2. Required change of injection frequency for budget neutrality



- outcomes, considering the number of annual injections and their associated drug and healthcare resource costs
- A literature review, including National Institute for Health and Care Excellence (NICE) technology appraisals, was conducted to identify sources of the number of injections in clinical practice

Figure 1. Model structure

- The number of injections of ranibizumab, aflibercept 2mg and faricimab were based on NICE TA800.⁴ The number of injections of aflibercept 8mg treatment for year 1 was extrapolated from the 48-week results of the PULSAR study.⁷ For year 2, all patients were assumed to maintain a 12-weekly injection frequency.
 - Cost data were derived from the National Schedule of NHS Costs 2021/22, and BNF^{5,6}
 - Treatment of one eye only
- Assumptions

Outputs

- Injections were administered in a non-consultant-led outpatient visit
- A PAS discount of 30% was applied to the list prices of aflibercept 2mg, aflibercept 8mg, and faricimab; an additional price reduction of 40% was assumed for aflibercept 2mg to reflect a future scenario of biosimilars entering the UK marketplace
- Budget impact per treatment
- Number of annual injections to achieve budget neutrality

CONCLUSIONS

- The study showed that ranibizumab biosimilars and potential aflibercept 2mg biosimilars are probable cost-saving treatment options for retinal conditions such as nAMD.
- While faricimab and aflibercept 8mg show benefits in durability, their higher acquisition costs require evaluation against budget constraints.

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References

- 1. The Royal College of Ophthalmologists "National Ophthalmology Database Audit, The First Report of Age-related Macular Degeneration Audit (AMD)", 2023
- 2. Panos, Georgios D et al. "Faricimab: Transforming the Future of Macular Diseases Treatment A Comprehensive Review of Clinical Studies." Drug design, development and therapy vol. 17 2861-2873. 18 Sep 2023
- 3. Nielsen, Jared S et al. "High-Dose Aflibercept for Neovascular AMD and DME in Suboptimal Responders to Standard-Dose Aflibercept." Journal of vitreoretinal diseases vol. 7,2 116-124. 15 Feb 2023
- 4. NICE "Faricimab for treating wet age-related macular degeneration, Technology appraisal guidance, TA800". 29 Jun 2022
- 5. NHS England "National Schedule of NHS Costs 2021/22". 5 April 2023
- 6. NICE, "British National Formulary (BNF)" (accessed 5 April 2024)
- 7. Lanzetta, Paolo et al. "Intravitreal aflibercept 8 mg in neovascular age-related macular degeneration (PULSAR): 48-week results from a randomised, double-masked, non-inferiority, phase 3 trial." Lancet (London, England) vol. 403,10432 (2024): 1141-1152. doi:10.1016/S0140-6736(24)00063-1
- Abbreviations: anti-VEGF, anti-vascular endothelial growth factor; BNF, British National Formulary; nAMD, neovascular age-related macular degeneration; NHS, National Health Service; NICE: National Institute for Health and Care Excellence; PAS, patient access scheme; SPC, Summary of Product Characteristics; UK, United Kingdom

