# TREATMENT BURDEN AND ECONOMIC IMPACT OF SWITCHING TO FARICIMAB IN NEOVASCULAR AGE-RELATED MACULAR DEGENERATION: A REAL-WORLD STUDY IN PORTUGAL

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## 1. BACKGROUND & OBJECTIVES

### Background

- Neovascular Age-Related Macular Degeneration (nAMD) represents a major cause of vision loss.
- Standard anti-VEGF therapies require frequent intravitreal injections, creating high clinical and logistical treatment burden.
- Faricimab is a novel bispecific antibody targeting both VEGF-A and Ang-2, designed to improve vascular stability and extend treatment durability.

### Study Objective

- To evaluate the real-world impact of switching from aflibercept 2 mg to faricimab on treatment frequency, visual acuity, healthcare costs, and system productivity in Portugal.

## 2. STUDY METHODS

### Study Design & Population

- **Setting:** Single-center, retrospective observational cohort study conducted at Hospital Garcia de Orta (ULS Almada-Seixal) between July 2024-October 2025
- **Inclusion Criteria:** Adult nAMD patients switched from aflibercept 2 mg (≥ 6 injections under a treat-and-extend regimen) to faricimab 6 mg due to incomplete response (persistent or recalcitrant exudation on OCT at treatment intervals ≤ 8 weeks).

### Clinical Outcomes

- **Visual Acuity:** Measured in logMAR (pre- vs. post-switch)
- **Treatment Interval:** Last fluid-free interval (weeks) (pre- vs. post-switch)
- **Annual Treatment Frequency:** Calculated at the individual patient level

### Economic & Productivity Analysis:

- **Perspective:** Portuguese National Health Service (SNS) using a top-down approach.
- **Direct Medical Costs:**

**Drug Acquisition:** Reference prices from the national catalog (SPMS, Nov 2025). Eylea® was the only aflibercept 2 mg formulation available at the time of the data collection.

**Procedure Package:** Standardized per administration package comprising consultation, ETDRS visual acuity, indirect ophthalmoscopy, retinography, OCT, and injection procedure (official SNS tariffs: Ordinance No. 254/2018).

- **Transportation Costs:** Derived from travel distance and transport modality using official travel reimbursement rates (Decree-Law No. 106/98 for private/public transport; Dispatch No. 7606/2023 for SNS transport).
- **Break-Even Analysis:** Level of price discount per treatment required to achieve annual cost neutrality (total treatment and drug costs only).
- **Productivity Analysis:** Capacity-based (patient-years treated per fixed administrations) and cost-based (patient-years treated within a fixed budget) approaches.

## 3. BASELINE CHARACTERISTICS & VISUAL OUTCOMES

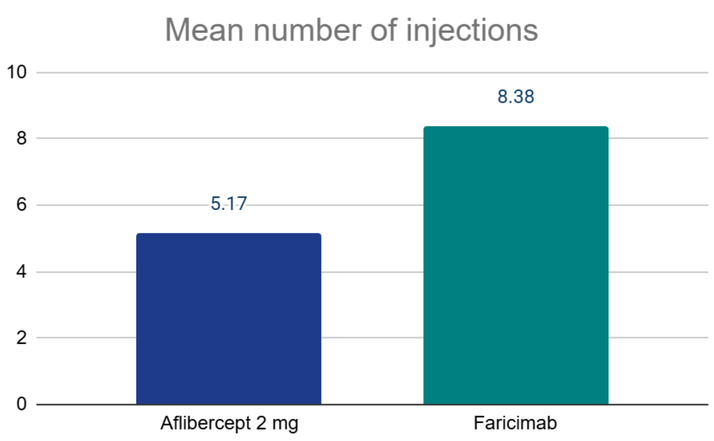
### Baseline Characteristics & Follow-up

- Study cohort: 60 patients (60 eyes); mean age 79.4 ± 6.8 years; 60.0% female.
- Follow-up Duration: Mean total follow-up of 1.99 ± 0.82 years (pre-switch: 1.34 years; post-switch: 0.65 years).

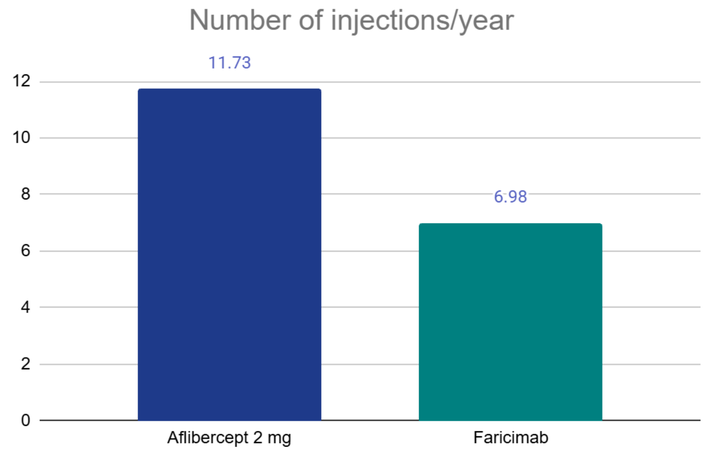
### Visual Acuity

- Visual acuity remained statistically stable following the switch to faricimab (mean change: +0.05 logMAR, p = 0.088).

## 4. TREATMENT INTERVALS & ANNUAL FREQUENCY



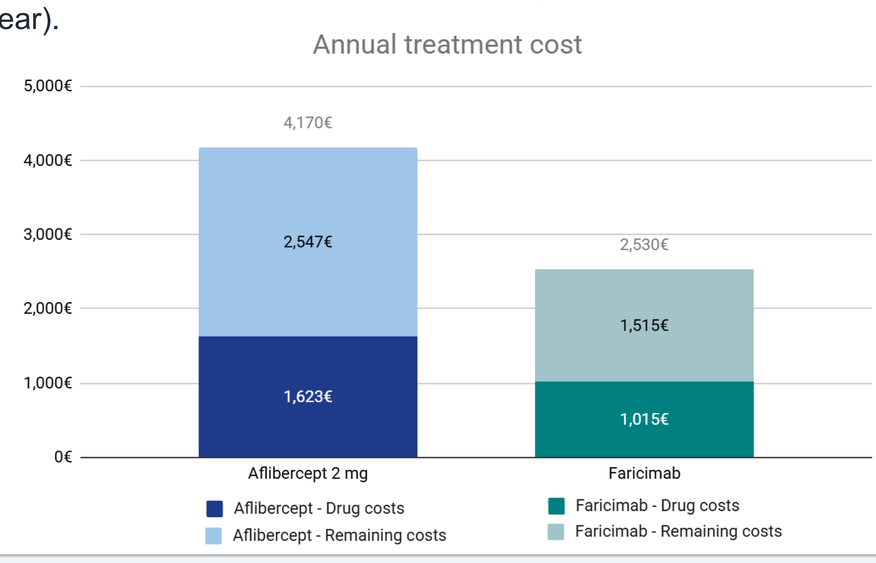

↑ **3.22 weeks** in mean treatment interval (**+62.3%;** p < 0.001)




↓ **4.76 injections/year** per patient (**-40.6%**, p < 0.001)

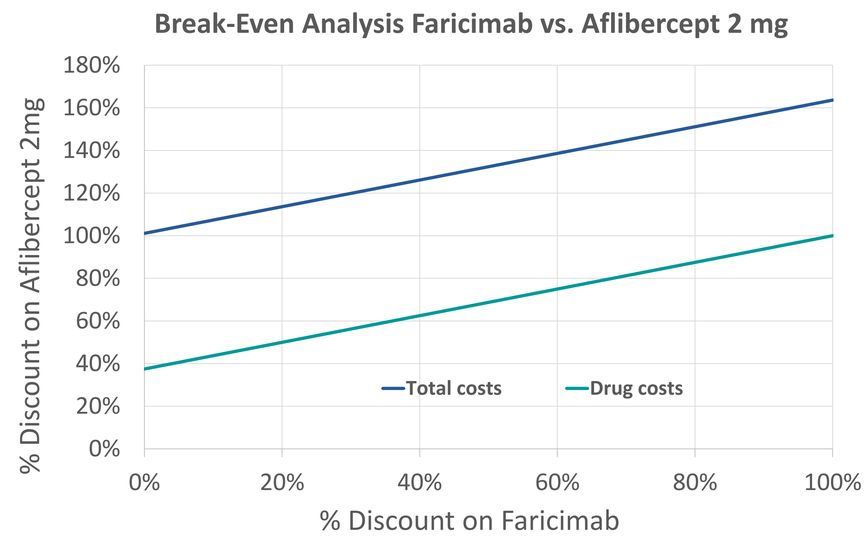
## 5. COST ANALYSIS

- **Annual Medical Costs Savings:** Absolute reduction of -€1,641.51 per patient-year (**-39.4%**), directly driven by the reduced annual treatment frequency.
- **Factoring Transportation:** Total annual costs decreased from €4,329.65 to €2,623.69 per patient-year when incorporating travel expenses (-€1,705.96 per patient-year).



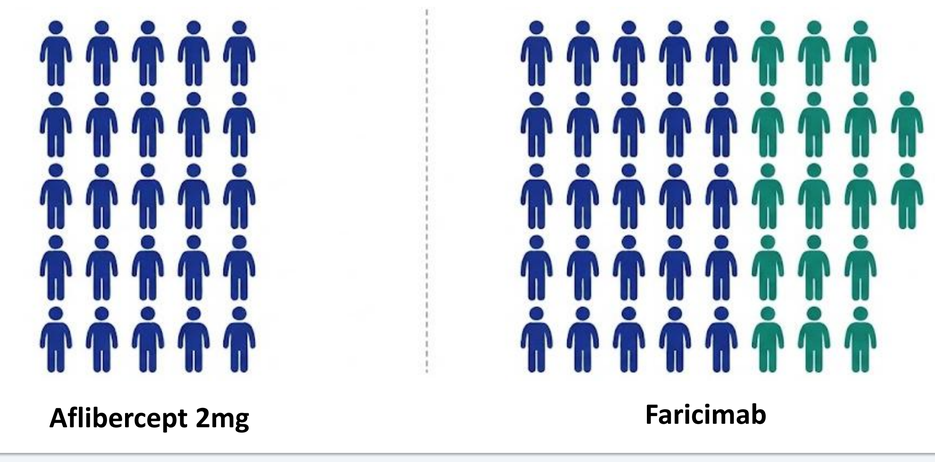

## 6. BREAK-EVEN & PRICE PARITY ANALYSIS

- **Total Cost Parity:** Considering total treatment costs (drug + procedures), aflibercept 2 mg would require a **101% price discount** (a negative price) to match the annual treatment cost of faricimab at current prices.
- **Drug Acquisition Cost Parity:** Considering drug costs alone, aflibercept 2 mg would require a **37.5% price discount** to achieve annual cost equivalence with faricimab.
- **Frequency Over Unit Price:** These findings demonstrate that treatment frequency—rather than unit drug price—is the primary economic driver in nAMD management.




## 7. PRODUCTIVITY ANALYSIS

- **Capacity-Based Productivity (+68.2%):** For a fixed clinical capacity (number of treatment administrations), switching to faricimab allows to treat 68.2% more patients.
- **Cost-Based Productivity (+64.9%):** Within a fixed annual hospital budget, switching to faricimab enables treating 64.9% more patients.




## 8. CONCLUSIONS & HEALTH POLICY IMPLICATIONS

**Key impact of switching to faricimab:**

- **Sustained Clinical Efficacy:** Significantly extended treatment intervals (+62.3%) while maintaining visual acuity stability.
- **Significant Cost Savings:** Achieves a 39.4% reduction in annual direct healthcare costs (€1,641.51 saved per patient-year), driven by a 40.6% reduction in injection frequency.
- **Resolving Clinical Bottlenecks:** Unlocks ~68% additional capacity in ophthalmology departments, relieving waiting lists and operational strain on healthcare staff.
- **Value-Based Healthcare Alignment:** Demonstrates how innovative therapies with extended durability deliver higher value by simultaneously improving patient experience, clinical outcomes, and health system sustainability.

## 9. FUNDING

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