

# Trends in Intravitreal Therapy Prescribing: Insights from Real-World Data (2021–2024)

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## BACKGROUND AND IMPORTANCE

Intravitreal therapies are the standard of care for macular diseases, but real-world practice often differs from clinical trials. The introduction of new agents and rising patient complexity create challenges for healthcare systems. Understanding prescribing trends in routine hospital practice is essential to guide therapeutic decisions and anticipate demand.

## AIM AND OBJECTIVE

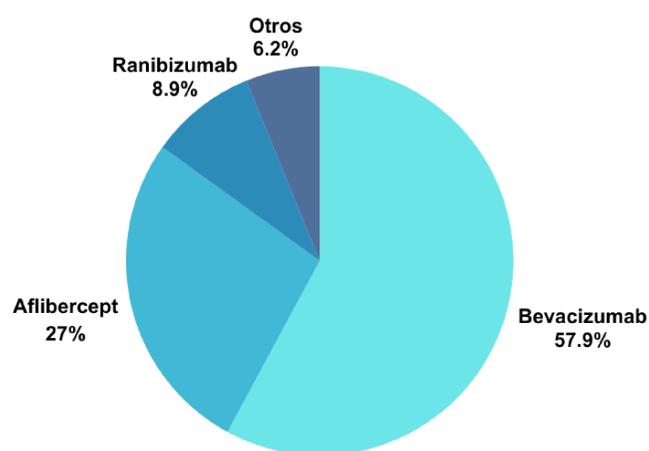
To analyze the evolution of intravitreal treatment prescribing patterns in patients with macular diseases between 2021 and 2024, assessing the impact of newly introduced therapeutic options and the increasing complexity of treated patients.

## MATERIALS AND METHODS

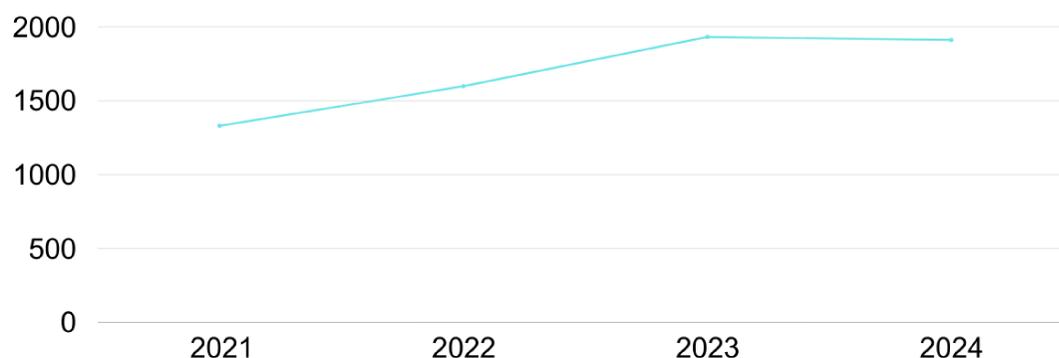
We conducted a retrospective observational study including all patients who received intravitreal injections between January 2021 and December 2024. Data extraction, integration, and processing were performed using Power BI as part of a multidisciplinary project. Descriptive statistics and simple linear regression were applied to evaluate temporal trends ( $p < 0.05$ ).

## RESULTS

### Distribution injections



### Increase in patients



Between 2023 and 2024, bevacizumab and ranibizumab use decreased by 13.78% and 1.24%, respectively, whereas aflibercept prescriptions increased by 13.38%. Notable findings included a rise in brolocizumab use (from 96 to 311 injections) and the introduction of faricimab (419 injections in 179 patients). Dexamethasone use increased by 14.63%, while fluocinolone remained stable.

Regarding clinical complexity, treatment lines were distributed as follows: 657 patients in first line, 411 in second, 180 in third, 70 in fourth, and 26 in fifth line. The mean number of treatment lines per patient increased from 1.35 (2021) to 1.76 (2024), showing a statistically significant upward trend (annual coefficient: 0.130; 95% CI: 0.048–0.212; standard error: 0.019;  $p = 0.021$ ).

## CONCLUSION AND RELEVANCE

Findings demonstrate a progressive increase in care demand, accompanied by changes in prescribing trends, with greater adoption of innovative therapies and higher clinical complexity among treated patients. These results underscore the importance of integrating data analytics into daily practice to optimize therapeutic decision-making and anticipate the growing healthcare demand in ophthalmology.

