

Real-World Treatment Patterns and Drug-Related Costs of Ulcerative Colitis: A Retrospective Cohort Study in Sweden

Szilcz M¹, Mulugeta González E², Heselius J², Naghipour P¹, Toghianian S²
¹Viti Science AB, Stockholm, Sweden, ²Pfizer AB, Stockholm, Sweden

INTRODUCTION AND AIM

Real-world data are increasingly utilized to inform policy and treatment guidelines to optimize the management of ulcerative colitis (UC), an inflammatory bowel disease with varying severity and progression.

Current treatment guidelines include a range of options when conventional treatments prove insufficient, such as tumor necrosis factor (TNF) inhibitors (e.g., infliximab), Janus kinase (JAK) inhibitors (e.g., tofacitinib), and other biologics (e.g., vedolizumab). Given the many options available for treating UC, this study aimed to characterize real-world patterns of non-conventional treatments and costs of UC in Sweden over time.

METHODS

- This was a retrospective cohort study in Sweden. Patients with a UC diagnosis (ICD-10 code:K51) recorded in the Swedish National Patient Registry after January 1, 2000, were included.
- Individual-level drug dispensation data were extracted from the Swedish Prescribed Drug Registry between July 2005 and September 2024.
- Treatment costs were calculated for TNF inhibitors, JAK inhibitors, and other biologics, considering initiation and maintenance costs. List prices were collected from the Swedish Dental and Pharmaceutical Benefits Agency. The exchange rate used for the conversion was 1 EUR = 11.20 SEK. Descriptive statistics were used to report treatment patterns and costs.
- Data analysis was conducted using an internally developed R-Shiny model platform.

RESULTS

In this cohort study, 11,623 patients with non-conventional UC treatments were included. The most common non-conventional first-line choice was adalimumab (78%), followed by vedolizumab (8%). Among patients starting treatment before 2022, which marks the update in treatment recommendations in Sweden, 5% received vedolizumab compared to 14% among those starting treatment after 2022 (Figure 1).

Figure 1: Proportions of Patients by 1st Line Non-Conventional UC Treatments, before and after Treatment Recommendation Update 2022

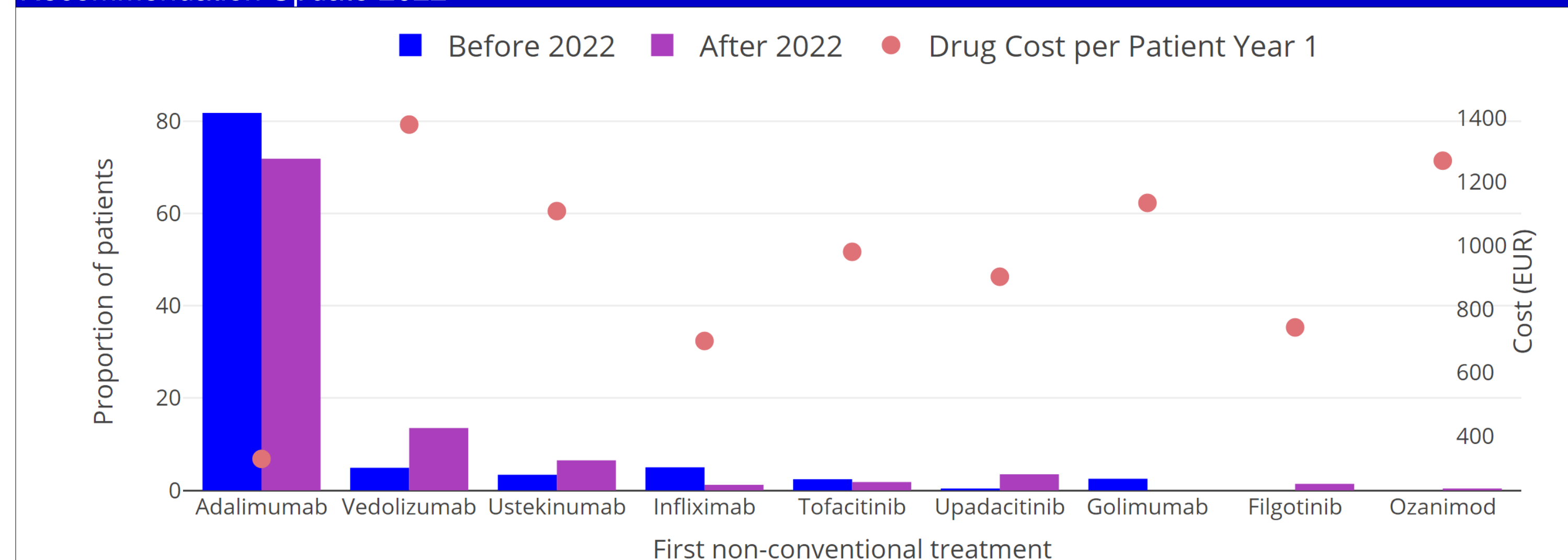
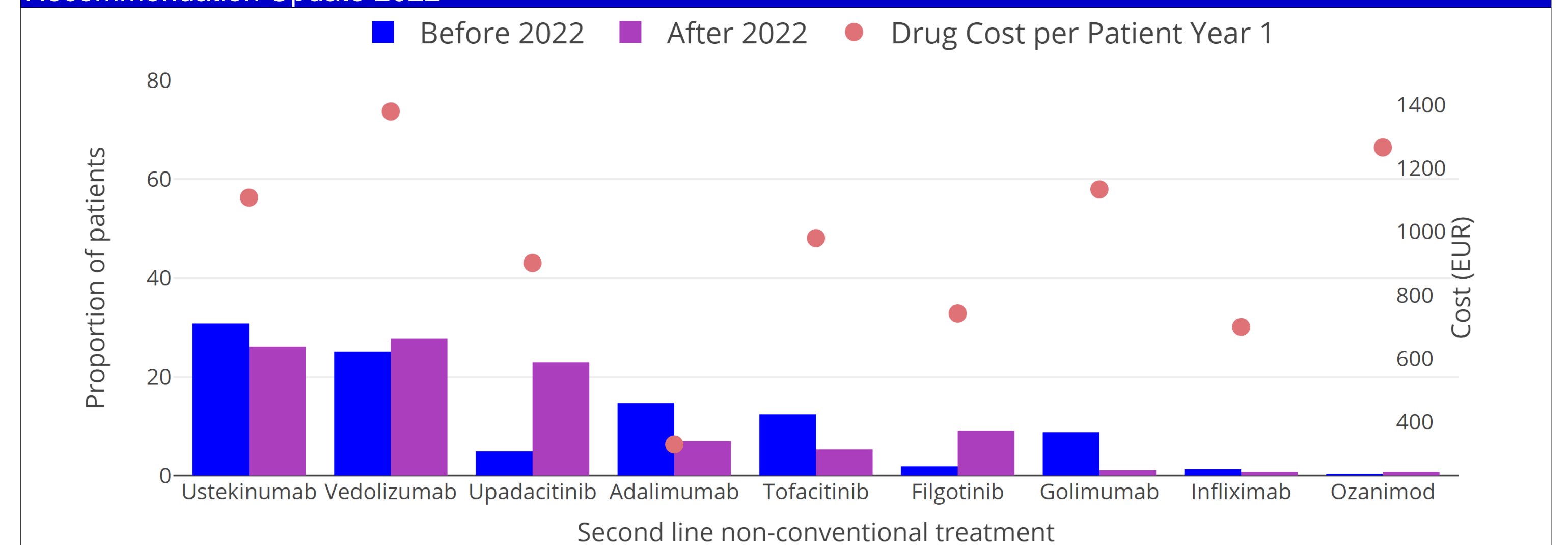


Figure 2: Proportions of Patients by 2nd Line Non-Conventional UC Treatments, before and after Treatment Recommendation Update 2022



Before the recommendation update (Figure 3), 51% of the patients remained on their 1st or 2nd treatment, and 34% discontinued. Ustekinumab was the most common 2nd and 3rd line treatment. After the update (Figure 4), 75% of the patients stay on their 1st or 2nd treatment, while 23% discontinue. Vedolizumab became the second most common 1st line treatment and the most common 2nd treatment.

Mean drug costs were 4,597 EUR per patient-year. Costs increased over time, reaching up to 6,324 EUR per patient-year for those starting treatment in 2022, a substantial increase compared to those starting treatment before 2022 (4,422 EUR).

Figure 3: Switches between Non-Conventional UC Treatments, before Treatment Recommendation Update 2022

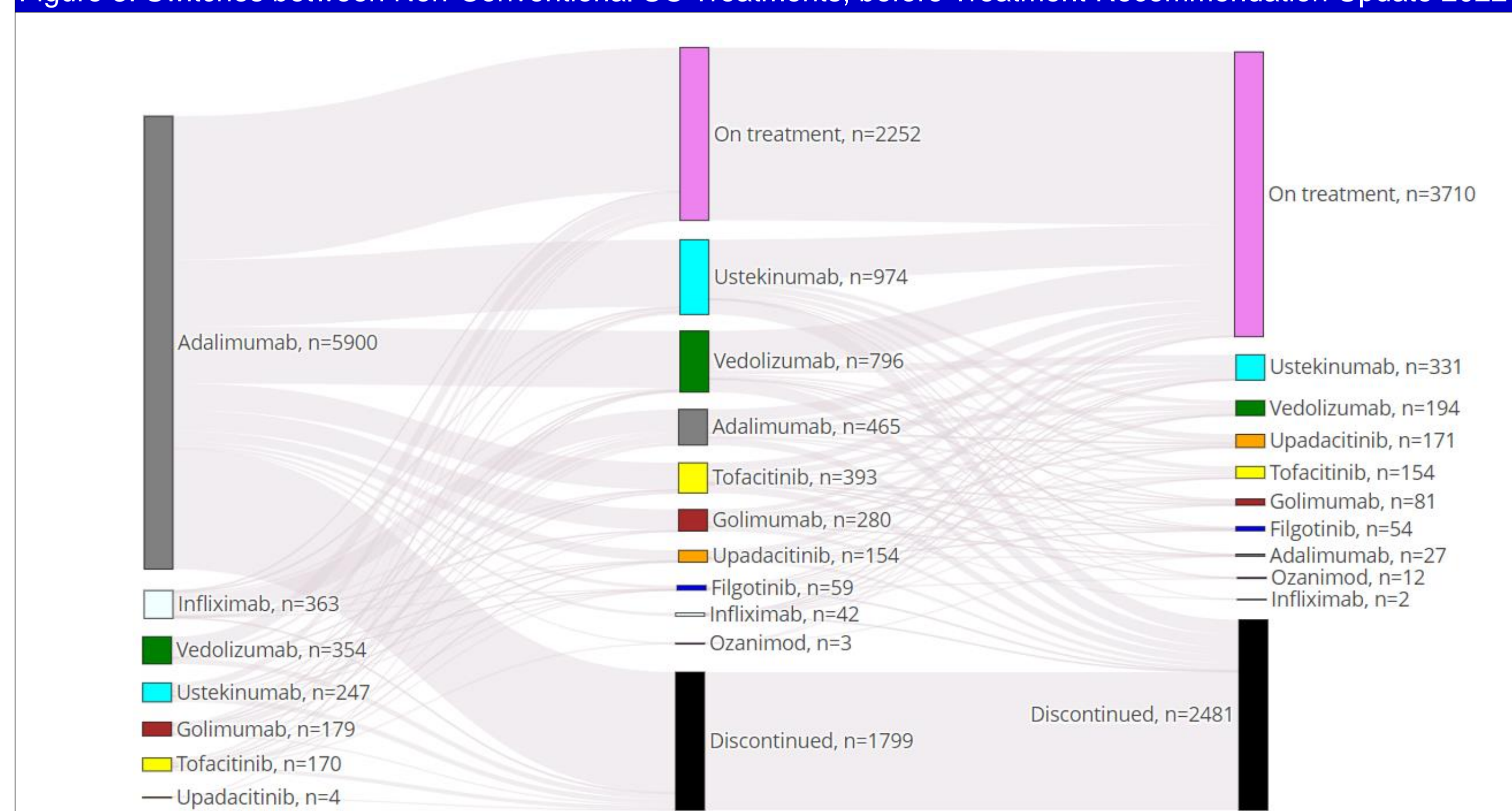
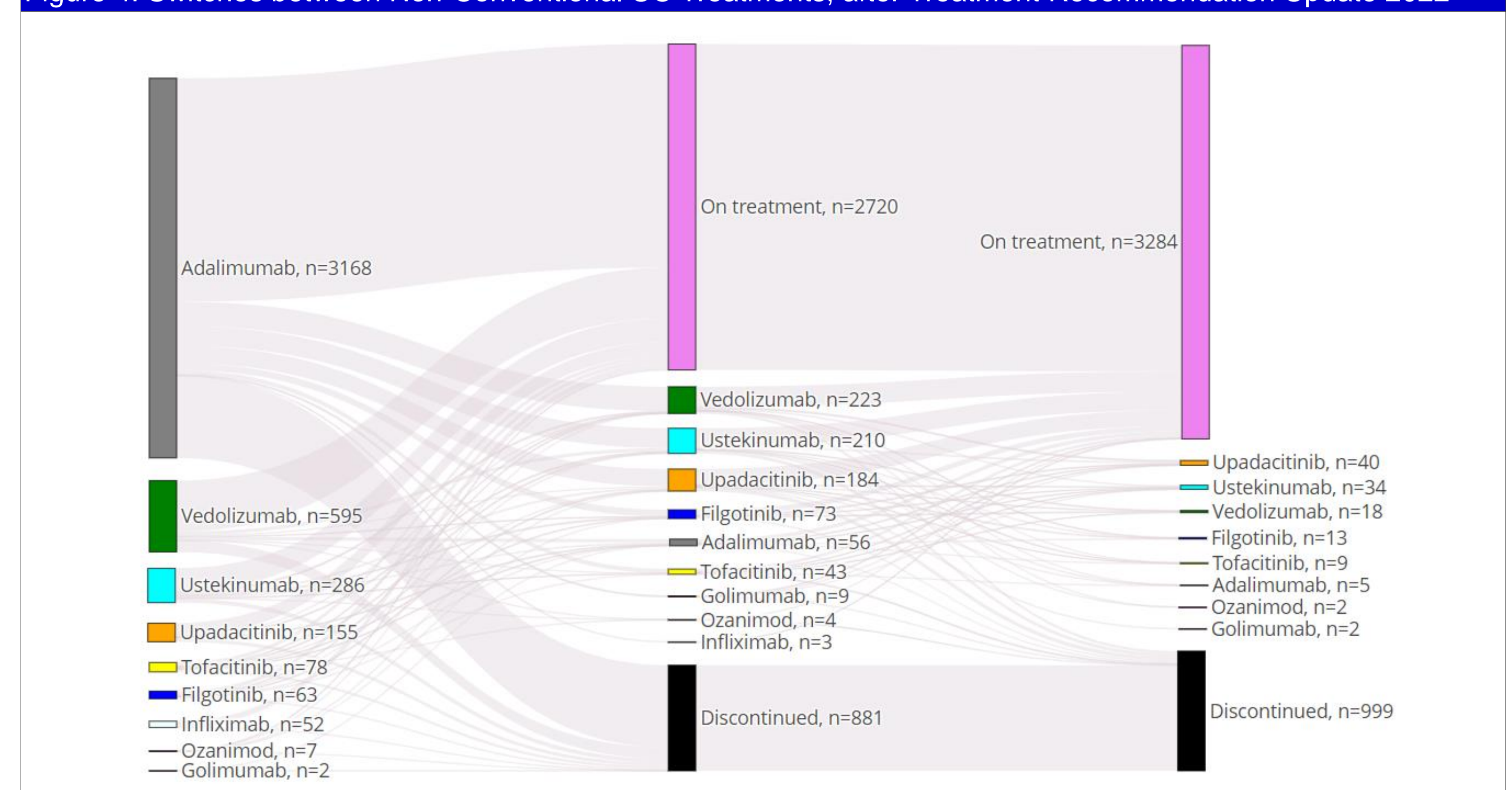


Figure 4: Switches between Non-Conventional UC Treatments, after Treatment Recommendation Update 2022



CONCLUSIONS

This study demonstrates that adalimumab was the predominant non-conventional first-line therapy, with increasing use of vedolizumab over time. With the increased use of targeted treatments, patients stay on their chosen treatment to a larger extent than before, and the discontinuation rate is lower. However, the mean drug costs of non-conventional treatments have substantially increased, indicating a need for optimization.

REFERENCES

Prescription data; National Board of Health and Welfare. List prices; The Dental and Pharmaceutical Benefits Agency, TLV. Summaries of Product Characteristics (SmPC) and information on reimbursement status; the Swedish Medicines Information Portal, FASS.

DISCLOSURES

M Szilcz is the owner of Viti Science AB and P Naghipour is an employee of Viti Science AB. E Mulugeta González, J Heselius and S Toghianian are employees of Pfizer AB, Sweden.