

Switching from Anti-VEGF to Corticosteroid Implant Therapy in Diabetic Macular Edema Patients

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BACKGROUND

- Diabetic macular edema (DME) is an ocular complication in patients with diabetes and can lead to vision impairment.¹
- Anti-vascular endothelial growth factor (anti-VEGF) injections have become recognized as the most effective treatment for DME patients. However, more than one-third of patients do not respond adequately to anti-VEGF treatment.^{1,2}
- Intravitreal steroid treatment has been established as a second line treatment for DME patients.² However, no clear guidelines on switching a patient from anti-VEGF therapy to a corticosteroid have been established.³
- Although corticosteroids have a longer duration of action and could reduce treatment burden compared to anti-VEGFs, they have a less favorable safety profile.³
- Real-world patterns around the time from anti-VEGF initiation to corticosteroid implants are not well understood.

OBJECTIVE

- The objective of this research was to characterize patients who initiated anti-VEGF therapy and the time to switch to corticosteroid implant by index anti-VEGF treatment.

METHODS

- Patients from 3 specialty ophthalmology networks and 6 integrated delivery networks within the OMNY Health real-world data platform from 2017 to 2023 were accessed.
- Patients were included if they had a DME diagnosis (ICD-10: E10.311, E10.3x1x, E11.311, E11.3x1x (excluding resolved cases, x=7)) with initiation of anti-VEGF therapy on/after the index diagnosis and no prior corticosteroid implants.
- Switching was defined as initiation of corticosteroid implant therapy after the anti-VEGF initiation.
- Demographic characteristics were tabulated at the index DME diagnosis. A cumulative incidence plot per index therapy was generated to characterize time from anti-VEGF initiation to switching or censoring.

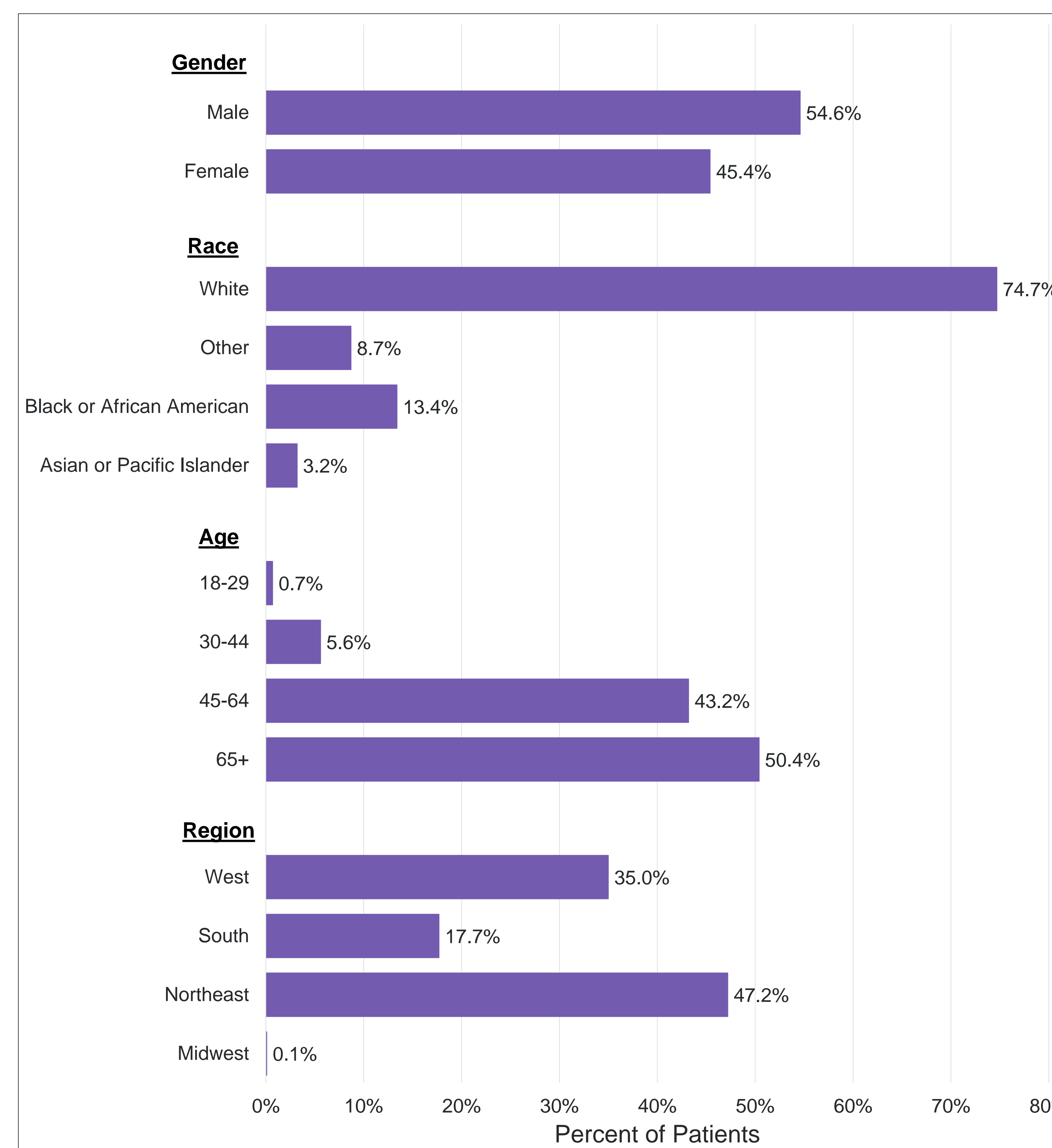
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RESULTS

- Of 39,158 DME patients, 9,923 patients without history of corticosteroid implant therapy initiated anti-VEGF therapy on or after their index diagnosis.
- Demographic characteristics of the patient population are summarized in Figure 1.

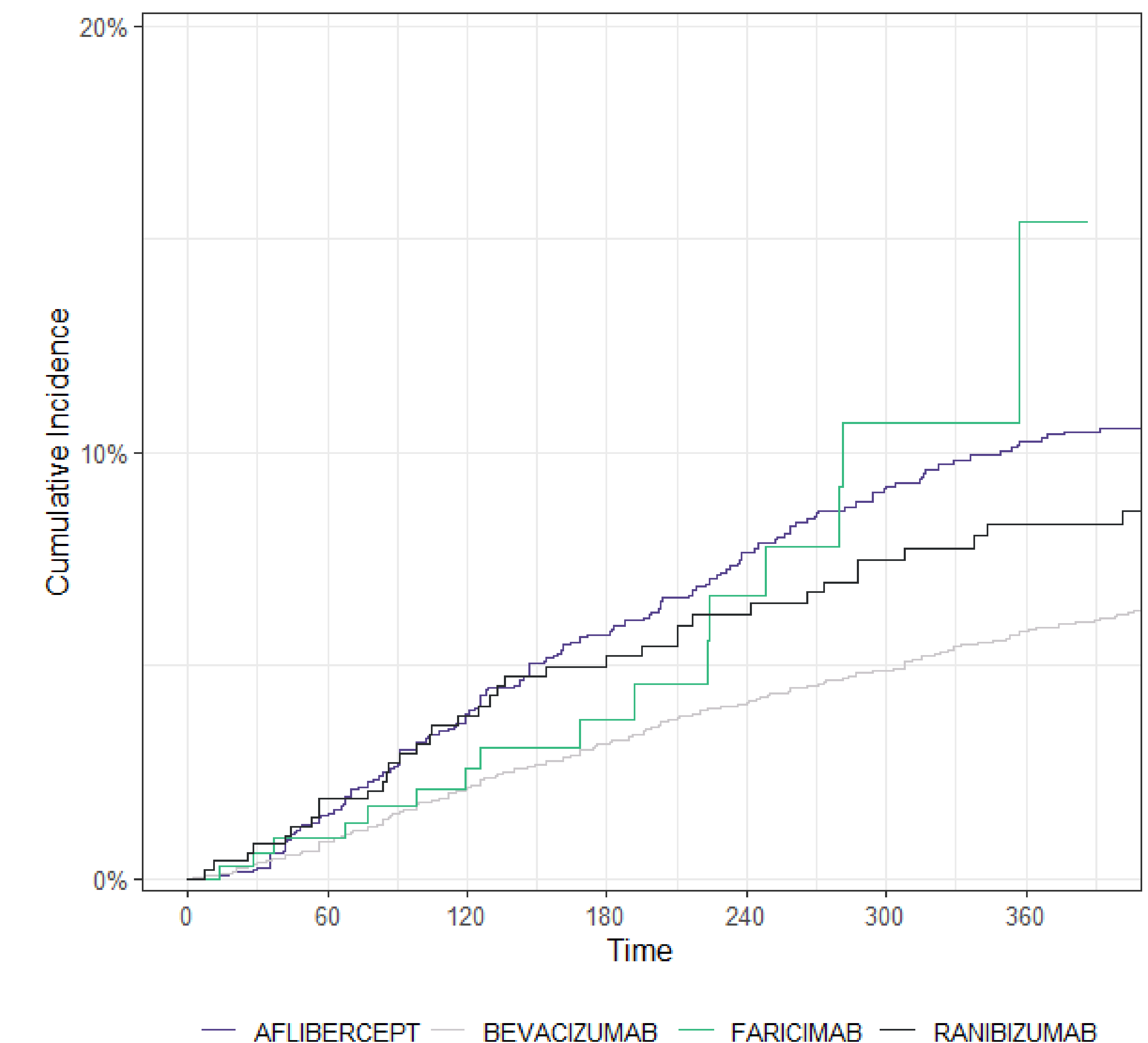
Figure 1: Demographic Characteristics of Patient Population



Note: Percentages were based on non-missing data; 61% of patients had known racial categories.

- The distribution of anti-VEGF treatments at index was as follows: 70% bevacizumab, 20% aflibercept, 5% ranibizumab, and 4% faricimab.
- Across all index anti-VEGF treatments, 8% of patients experienced a treatment switch to a corticosteroid implant within the observed follow-up time.
- The cumulative incidence plot of switching from anti-VEGF to corticosteroid implant is presented in Figure 2.

Figure 2: Cumulative Incidence Plot for Time to Corticosteroid Implant Therapy from Anti-VEGF Initiation



- Proportions for switching at 3, 6, 9, and 12 months were as follows:
 - Aflibercept: 2.7%, 5.7%, 8.6%, and 10%
 - Bevacizumab: 1.5%, 3.2%, 4.5%, and 5.8%
 - Faricimab: 1.7%, 3.7%, 7.8%, and 15%
 - Ranibizumab: 2.7%, 5.2%, 6.7%, and 8.3%

DISCUSSION AND CONCLUSIONS

- Results provide insight into the real-world treatment experience of anti-VEGF initiators for DME.
- Bevacizumab had the lowest proportion of patients who experienced an event in the first year following anti-VEGF initiation.
- Analyses accounting for the severity would be beneficial to understand the association with time to switching.

CONTACT INFORMATION

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