Perspectives on Efficacy and Safety of Anti-Vascular Endothelial Growth Factor (Anti-VEGF) Biosimilars in the Treatment of Neovascular Age-Related Macular Degeneration (nAMD)

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Introduction: With expiry of originator anti-vascular endothelial growth factor (anti-VEGF) patents, policies are transitioning to the use of biosimilars. It remains unclear as to how this transition will impact patient outcomes and provider practices. This study aimed to explore the perspectives of Canadian ophthalmologists and patients with neovascular age-related macular degeneration (nAMD) on anti-VEGF biosimilar safety and efficacy, as well as current knowledge on rollout policy.

Methods: Ophthalmologists performing anti-VEGF injections were invited from August to October 2023 to participate in a physician survey. nAMD patients were invited in-person in August 2023 to participate in a patient survey. Both surveys included ranking questions and visual analogue scales (VAS) (1-10) to measure agreement with given statements. A priori, "agreement" with these statements was defined as a VAS response of between 7 and 10. All survey participants were invited to a semi-structured interview to supplement survey responses. Analysis of interview data was performed in Dedoose, a specialized software for qualitative analysis, where responses were analyzed using Thorne's interpretive description approach.

Results: There were 38 ophthalmologists across 9 provinces who participated in the survey and 3 who subsequently completed an interview. 47% of ophthalmologists in our sample were unaware of their province's anti-VEGF biosimilar rollout policy and 68% were uncomfortable with using biosimilars, with interviews suggesting preference to be late- rather than early-adopters of biosimilars. 79% of ophthalmologists felt that the switch to biosimilars should not be mandatory. Safety and efficacy of biosimilars were most commonly ranked by ophthalmologists to be the most important factors in choice of treatment. 50 nAMD patients participated in the survey and 11 subsequently completed an interview. 88% of patients in our sample were not comfortable being switched to a biosimilar, with 94% indicating that they believe their doctor should have the choice to decide which drug is best for them. Interviews revealed that patients assumed biosimilars were of lower safety and efficacy compared to originators but had great trust in their physicians' treatment decisions.

Conclusion: Hesitancy with the use of anti-VEGF biosimilars was seen both among Canadian ophthalmologists and patients with nAMD, most commonly in relation to safety and efficacy. Most physicians and patients believed that a switch to biosimilars should not be mandatory.