



FIGHTING
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CANADA

AMD COFFEE CONNECTIONS – ST. JOHN'S

Speakers: Morgan Ineson; Dr. Marko Popovic

If you have questions about your diagnosis or would like support finding resources, please contact the Fighting Blindness Canada Health Information Line at healthinfo@fightingblindness.ca or by phone at 1.888.626.2995. Our team is available to help you navigate your condition, find relevant clinical trials, and connect you with trusted information and support.

Overview and Disclaimer

Morgan Ineson: Welcome and good morning. Thank you so much to everyone for joining us today for Coffee Connections. My name is Morgan Ineson, and I'm the Senior Manager of Education and Engagement at Fighting Blindness Canada. Fighting Blindness Canada is dedicated to supporting vision research and connecting people living with eye disease to education, trusted information, and advocacy.

Before we begin, I want to note that the views shared by our speakers today are their own and don't necessarily reflect those of Fighting Blindness Canada. Any mention of products, treatments, or services doesn't mean we're endorsing them, and sponsors do not influence the content of our program. This discussion is for educational purposes only — any decisions about your eye care should be made with your own eye doctor.

Morgan Ineson: I'd like to introduce Dr. Marko Popovic, a medical retina specialist at St. Michael's Hospital and the Kensington Vision and Research Centre in Toronto. He's an Assistant Professor at the University of Toronto, and his research focuses on retinal conditions including diabetic retinopathy, AMD, and retinal vein occlusion. Welcome, Dr. Popovic, and thank you so much for being here.

Dr. Marko Popovic: Thank you so much for having me, Morgan, and thank you to you and the team for organizing this event and for the opportunity to discuss these topics.



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What Is AMD? Dry vs. Wet

Morgan Ineson: What is age-related macular degeneration, and can you talk about the different types?

Dr. Marko Popovic: The diagnosis is really in the name. It's age-related — most common in those 65 and older, and disproportionately affecting people in their 70s, 80s, and 90s. It affects the macula, the central part of the retina, which you can think of as the film of the eye — it's responsible for the fine, central, color vision you use for day-to-day tasks. In the early form, deposits of fats and proteins called drusen build up underneath the retina; that's dry AMD. In its more advanced form, new blood vessels can start growing behind the retina and leaking or bleeding — that's wet AMD, and the most common symptom is that straight lines appear wavy or distorted. Wet AMD is the more common cause of significant vision loss, but it's actually the rarer form overall — about 90% of AMD is dry, and 10% is wet.

Treatments for Wet AMD

Morgan Ineson: Could we talk about what treatments are available for the two types, starting with wet?

Dr. Marko Popovic: Treatment for wet AMD has changed enormously over the last 20 years. Before the early 2000s, we really had no effective drug therapies — mainly laser-based approaches, which were far less effective than what we have now. Starting around 2005 to 2010, anti-VEGF drugs were developed, which inhibit a molecule involved in the abnormal growth of blood vessels. In wet AMD, the retina is starved of oxygen, so the body grows new, fragile blood vessels that leak and bleed; anti-VEGF medication, delivered directly into the eye, shrinks those vessels down. This has been a genuine paradigm shift — not only slowing progression, but in many cases restoring vision that had been lost. Because the medication doesn't penetrate the eye effectively as a drop, it has to be delivered by injection, typically starting every four weeks and then spaced out over time as the disease stabilizes, to eight, twelve, even sixteen or twenty weeks with some of the newer, more potent agents.



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Dry AMD hasn't had as many targeted treatments. Once drusen become large enough, we recommend AREDS2 vitamins — a specific formulation shown in large multi-center studies to reduce drusen growth and slow progression toward wet AMD. Other than that, I recommend leafy greens, fish, protecting the eyes from sunlight, and avoiding smoking. There are also new treatments emerging for advanced dry AMD, or geographic atrophy, where the light-sensitive cells themselves are lost — injectable drugs that slow the growth of those areas. They're not yet available in Canada, but there's data from the United States, and it's a fast-moving area.

Vitamins: Who Actually Benefits

Morgan Ineson: A question we get a lot through our Health Information Line: if you have dry AMD, should you just be taking the vitamins, or are they more appropriate for certain people?

Dr. Marko Popovic: Think of it like an inverted pyramid. The original studies didn't really look at people with only tiny drusen and early dry AMD, because the benefit wasn't clearly there yet. Once someone reaches an intermediate or advanced stage, that's where the vitamins hold real benefit. Your doctor will look at the back of the eye and at OCT scans to determine how advanced the disease is, and whether you're likely to benefit.

The Injection Procedure

Morgan Ineson: A lot of patients are daunted by the idea of an eye injection, though it's usually less scary than it sounds. Could you walk us through the procedure, and how you decide which medication and how often?

Dr. Marko Popovic: It sounds much scarier than it is. We numb the eye with a drop, clean it, and the injection itself takes about two seconds, delivered into the white part of the eye. Patients feel a bit of pressure, not real pain. Once someone has been through the first treatment, that apprehension tends to disappear — many patients don't even realize the injection has happened.



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As for which medication: fifteen years ago we had very limited options, so there wasn't much choice involved. Now, with more agents available, it's an evolving area — we don't yet have a reliable way to predict which patient will respond best to which drug. Some newer agents are stronger, which means longer intervals between injections — going from every four weeks to eight, twelve, even sixteen or twenty weeks, which meaningfully reduces the burden of frequent clinic visits.

Access to Care: Distance and Follow-Up

Morgan Ineson: We're here in St. John's, and a lot of people have to travel long distances for appointments — being able to space out those visits matters even more here than somewhere like Toronto.

Dr. Marko Popovic: Absolutely. We recently published research looking at which patients with wet AMD are most likely to be lost to follow-up over time, since missing regular injections significantly raises the risk of irreversible vision loss. Distance from the clinic turned out to be one of the strongest predictors, especially for patients who are older or need caregiver support to get to appointments. Anything we can do on the clinic side to reduce the number of required visits, while maintaining good outcomes, is a real benefit — and that's exactly what these newer, longer-acting anti-VEGF agents allow.

Emerging Research and Future Treatments

Morgan Ineson: What are some of the more promising treatments being investigated — either new drugs, or better ways of delivering them?

Dr. Marko Popovic: There's progress across the board. For wet AMD, there are ultra-slow-release formulations that can last six months between doses, and new delivery systems — a small surgical procedure creates a reservoir that continuously releases medication, refilled only every six to twelve months instead of monthly injections. There's also gene therapy research aimed at getting the eye to produce its own anti-VEGF molecule after a single treatment, rather than requiring repeated injections at all.

On the dry AMD side, injectable drugs that slow the growth of geographic atrophy are furthest along — two are approved in the U.S., and Health Canada is reviewing one.



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There's also research into non-injection delivery — pills, under-the-skin injections, even eye drops. And for patients who've already lost significant vision to advanced dry AMD, cell-based therapies aim to regenerate lost retinal cells rather than just slow further loss — which would be a genuinely transformative shift if it succeeds.

Morgan Ineson: It's hard to overstate the impact anti-VEGF treatment has had — I remember when laser treatment for macular degeneration could actually cause vision loss as a side effect of the procedure itself.

Are there other things people can do, beyond diet and vitamins, to help protect or preserve their vision?

Dr. Marko Popovic: Those really are the main ones. We know with certainty that smoking makes AMD worse, so we recommend not smoking. Sunlight exposure without protection, like sunglasses, can also make the disease worse, and diet matters too. Beyond that, the evidence for other lifestyle factors is still developing.

Q&A: Improvement Without Treatment

Audience member: I have dry AMD, and in the last couple of years my ophthalmologist has told me it's actually improved. I was surprised, since I usually only hear about progression, not improvement.

Dr. Marko Popovic: That's a great point. So it improved without any real treatment — just the AREDS2 vitamins? These drusen almost have a mind of their own — without intervention, some get bigger, some get smaller, since the body is also actively working to clear them away, alongside the process that creates them in the first place. In your case, your body seems to have cleared them effectively. We're very happy when that happens, and it's actually informing research into how we might help replicate that process in patients whose drusen aren't clearing on their own.



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Q&A: Stem Cell and Cell-Based Therapy

Audience member: I had followed stem cell therapy research a few years ago but haven't kept up — has there been progress, and will it become regularly available to patients at some point?

Dr. Marko Popovic: There has been real progress. Astellas, one of this event's sponsors, is developing a cell-based therapy for patients who've lost central vision to advanced dry AMD — a surgical procedure implants cells over the damaged area, aiming to improve vision that's already been lost. It's currently in phase one/two trials, meaning it's being tested in the first few dozen human patients after preclinical testing. If that goes well, it moves to phase three trials in hundreds of patients before Health Canada or the FDA would consider approving it for general use — likely a few years out. This field has had setbacks before, so caution is warranted, but it's now entering a more mature stage of experimentation.

Morgan Ineson: The stem cell work is fascinating — and correct me if I'm wrong, but it's not just about placing cells in the eye. It's developing the right cells, getting them into the eye, and getting them to stay where you want them to — several very complicated stages.

Dr. Marko Popovic: Exactly — you can think of the retina like a ten-layer cake, with each layer made of very specific, precisely arranged cells. Directing stem cells to correctly form each of those layers is a tall order. But relative to five or ten years ago, we've made real progress, and reaching the stage of human trials with therapies we believe actually work represents a lot of promise.

Q&A: Choosing Between Anti-VEGF Medications

Audience member: I'm a low vision therapist with Vision Loss Rehab, and clients often ask me which injection is best. As an ophthalmologist, how do you decide between medications like Lucentis and Eylea?

Dr. Marko Popovic: Eylea (afibercept) was for a long time almost the only option, originally in a 2mg formulation; it's since been reformulated into an 8mg version, Eylea



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HD, which is more durable and requires fewer injections. Roche's Vabysmo (faricimab) targets two molecules instead of one — VEGF and Ang2 — and likely benefits patients whose disease is more Ang2-driven, though we can't yet reliably predict who that is from imaging alone. There are also practical considerations: Eylea HD's larger injection volume makes me cautious in patients with advanced glaucoma, while Vabysmo carries a small, rare risk of increased eye inflammation, so I avoid it in patients with a prior history of that. In practice, I use all of these regularly, and different retina specialists reasonably favour different agents — there's no single best choice for every patient.

Morgan Ineson: Are there provincial considerations too, in terms of what's typically first-line treatment?

Dr. Marko Popovic: Yes, this varies a lot by province. In Ontario, I have the discretion to use a newer agent first-line if I think it's appropriate. In other provinces, funding rules require patients to try an older-generation drug first and only step up after it fails. My own view is that this should ideally be the doctor's discretion, based on the specific patient's disease characteristics — I'd like to see more provinces move toward Ontario's model.

Q&A: Provincial Drug Coverage

Morgan Ineson: I'm not sure what the policy is here in Newfoundland — does anyone know?

Audience member: Under the Newfoundland and Labrador Prescription Drug Program, the first choice is Avastin — patients need three injections to check for any reaction before switching to Eylea, Vabysmo, or Biobiz if it isn't working. That's the standard route without private insurance; with personal insurance, the ophthalmologist can make a recommendation based on your specific eye condition. This changed in 2018 — before that, patients were capped at 12 to 15 injections of Lucentis or Eylea before being switched to paying for Avastin themselves. We managed to get that changed, and this is how it's handled here now.

Dr. Marko Popovic: I can empathize with how difficult that prescribed process can be for ophthalmologists and patients alike. Thankfully, most provinces do allow a switch to second-generation agents for patients with severe, high-burden disease if the first-line



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drug fails, which at least provides a backstop. But ideally, I wouldn't use Avastin first-line for most patients — we don't do that here in Ontario, since I consider it an inferior drug for this purpose.

Morgan Ineson: It's similar out west — Avastin is first-line in Alberta and BC too. Avastin is interesting because it wasn't developed as an eye drug in the first place — it's a cancer drug, right?

Dr. Marko Popovic: Exactly — all of these anti-VEGF drugs originated in oncology. Avastin is essentially a repackaged cancer drug used off-label in the eye. The issue is that it doesn't have the same depth of safety and efficacy data in thousands of patients that the other agents have. In practice, it does work to some degree, but it's not as effective as the newer options — it's an okay starting point, but not a perfect one.

Morgan Ineson: That's where advocacy comes in — it matters that governments and payers understand why these newer treatments are so important to patients.

Q&A: Sunglasses and Light Sensitivity

Audience member: I have chronic migraine, so I pay close attention to sunglasses. In terms of what makes AMD worse, is it brightness in general, or specific qualities of light?

Dr. Marko Popovic: It's specifically sunlight, because of the harmful UV exposure that can damage the circuitry of the cells responsible for central vision. A brightly lit indoor room isn't the same concern — direct sunlight is the bigger issue.

Audience member: And separately from damage — in terms of actually seeing, since contrast sensitivity is such a big issue for people with AMD, are certain tints of glasses better?

Dr. Marko Popovic: There are FL41-tinted glasses that some patients find effective, though I don't recommend a specific brand or tint universally. In general, a well-lit, bright environment does make a real difference for people with compromised vision — especially for things like reading screens at work.



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Morgan Ineson: Our Vision Loss Rehab colleagues at the back have examples of different tinted glasses and can talk more about lighting — I'd encourage you to speak with them as well.

Q&A: AREDS2 Vitamin Brands

Audience member: Is there a specific eye vitamin brand that's better than the rest? There are so many different kinds.

Dr. Marko Popovic: What you want to look for specifically is a vitamin labeled as an AREDS2 formulation — named after the original studies that tested this exact formulation and showed it works. Common brands like Vitalux or PreserVision will say directly on the box that they're an AREDS2 vitamin for macular degeneration. Those are the ones I'd trust to have the benefit shown in the research.

Closing — Expert Session

Morgan Ineson: Thank you so much for joining us and sharing all of that information.

Dr. Marko Popovic: Thank you so much, Morgan, and thank you all for the insightful questions.