

Eylea Injection Treatment of Macular Degeneration

Groundbreaking treatments for wet AMD (Age-related Macular Degeneration)

In the United States, an estimated 11 million Americans have some form of AMD. This disease erodes central vision, complicating day-to-day activities such as reading, driving and identifying faces. AMD has two forms – wet and dry. While dry AMD leads to a gradual loss of vision, wet AMD leads to faster vision loss and is the most advanced form of the disease. It is responsible for 90 percent of all AMD-related blindness.

A decade ago, wet AMD was considered untreatable and two-thirds of those affected could expect to be legally blind within two years of developing the disease. Today there is a very different story about wet AMD thanks to the introduction of injectable [anti-vascular endothelial growth factor \(anti-VEGF\) drugs](#). The usage of anti-VEGF drugs has nearly halved the incidence of AMD-related blindness in some countries, and ophthalmologists are now able to help wet AMD patients maintain – and in some cases restore – vision.

“This class of drugs represents a huge leap in treatment for macular degeneration, and doctors have been blown away by the results,” said Rahul Khurana, MD, a clinical spokesperson for the American Academy of Ophthalmology and retina specialist. “Ten years ago, wet AMD was a one-way ticket to blindness, but now I have patients with the condition who are able to read and drive; and some even maintain 20/20 vision.”

Multiple anti-VEGF drugs are available to treat AMD, but four are commonly used for the condition. Three of these, ranibizumab (brand name Lucentis®), aflibercept (brand name Eylea®) and brolucizumab (brand name Beovu®), were designed specifically for the treatment of AMD. A fourth drug, bevacizumab (brand name Avastin®), was originally developed to treat various types of cancer, but is commonly used "off-label" in patients with AMD.

As doctors and the media debate the relative merits and disadvantages of these drugs, the growing collective experience of ophthalmologists indicates that all four are safe and effective treatments for wet AMD.

How do they work?

Wet AMD occurs when abnormal blood vessels begin to grow underneath the retina and leak blood or fluid that blurs central vision. A chemical called vascular endothelial growth factor, or VEGF, causes this abnormal growth. Anti-VEGF treatments seek out harmful

VEGF molecules and block them. This reduces abnormal growth and leakage, which helps to stabilize vision loss and, in some cases, can improve sight.

Patients can receive treatment in their doctor's office. The ophthalmologist will place anesthetic and antiseptic drops on the eye to numb it, then administer the anti-VEGF drug by injection.

"An eye injection may sound scary, but the needle is very small and the injection is very quick – a fraction of a second," said Raj Maturi, MD. "Many of my patients are nervous about this the first time, but by the second treatment, they are much more confident in the process and its effectiveness."

The recommended frequency of these injections varies from every few weeks to every few months, and duration of treatment varies by case. Patients will likely require multiple doses over the course of many months, and repeat treatments are often needed for continued benefit.

How are they different?

Lucentis, Eylea and Avastin offer similar visual benefits, according to many ophthalmologists. But Beovu is the first anti-VEGF drug to provide similar benefits with a single eye injection only four times a year.

Here are some other differences that your ophthalmologist may explain to you as you discuss treatment options.

FDA approval

Lucentis, Eylea and Beovu have been FDA-approved for use in the eye. But Genentech, the company that manufactures Avastin and Lucentis, has not sought FDA approval for Avastin to be used as treatment of wet AMD.

However, Avastin was FDA-approved as a treatment for colon cancer in February 2004, and since then has been used by ophthalmologists to treat wet AMD "off-label" with [great results](#). In fact, half of ophthalmologists prescribe Avastin as a first-line treatment for wet AMD.

Cost

Avastin, at approximately \$50 per average treatment, is significantly less expensive for the patient than the alternatives (~\$1,800 to \$2,000 for Eylea, Lucentis or Beovu).

Eylea's and Lucentis' significantly higher price tags reflect the costly process of FDA approval for their intended use. Although Avastin carries a similarly high price tag when used for colon cancer, it is much less expensive as an eye treatment because only 1/40th of the drug is being used for each dose.

Price is often a deciding factor for patients. Drug manufacturers do offer some patient assistance programs to help subsidize costs. But for many individuals, the nearly \$2,000 difference between these drugs and Avastin can add up to thousands of dollars or more in out-of-pocket costs over the course of treatment. This cumulative price differential has been the main focus of media stories about the drugs.

Also related to the issue of cost is insurance coverage. All three drugs are covered by Medicare, but the terms of coverage can be complex. Not all injections may be covered by each insurance carrier.

Risks

Numerous studies have concluded that there are minimal differences in risk between the three drugs. A concern is that there is a greater possibility of infection with Avastin due to potential contamination when the drug is being repackaged into smaller doses for the eye. When appropriate guidelines are followed for preparing such medicines, this risk is minimized. Additionally, "in the vast majority of cases of eye infection, the source is the surface of the patient's own eye, rather than contaminated medication or anything else," said Abdish Bhavsar, M.D., Academy clinical spokesperson and retina specialist.

Packaging and accessibility

Since Lucentis, Eylea and Beovu are FDA approved for use in the eye, they are manufactured and delivered to ophthalmologists as eye injectables, usually stored in the ophthalmologist's office and available for use whenever they are needed.

Avastin, in contrast, is a repackaged drug. It is shipped from the manufacturer to a special pharmacy that repackages it into smaller doses for the eye and then delivers it to doctors' offices. If you and your ophthalmologist decide that Avastin is right for you, you may have to come back for a second appointment to receive the treatment. In most cases your doctor will be able to pre-order your prescription each month and have it ready for your subsequent appointments, minimizing this issue after the initial treatment.

Which treatment is right for you?

Multiple studies have compared these anti-VEGF drugs and found that all help patients retain their ability to see. So the American Academy of Ophthalmology recommends that ophthalmologists counsel patients about the availability of these treatments.

Patients may differ in how their eyes respond to one treatment versus another. Additionally, there may be cause at some point during a patient's course of treatment for the ophthalmologist to switch patients from one drug to another. Your ophthalmologist will help you pick a therapy after reviewing your unique condition and the relative tradeoffs of these treatments.

[Learn more about these drugs as treatment for diabetic macular edema.](#)

Source: <https://www.aao.org/eye-health/diseases/avastin-eylea-lucentis-difference>