**Ophthalmology Department**
**Russells Hall Hospital**

The Dudley Group
NHS Foundation Trust

# Patient Information

# Brolucizumab (Beovu) for age-related macular degeneration (ARMD)

## Introduction

Your eye doctor has already given you a patient information leaflet called '**Your guide to age-related macular degeneration'** describing the various forms of age-related macular degeneration (ARMD) and their treatment.

Your doctor has found that you have the wet form of ARMD and need to be started on eye injections to treat it.

This leaflet contains detailed information on a treatment with the medical name of 'brolucizumab,' also known as Beovu. The leaflet includes information on the procedure, the risks and the benefits.

## What is brolucizumab (Beovu)?

If your doctor is suggesting Beovu treatment, it means your eye contains extra amounts of a protein called vascular endothelial growth factor (VEGF). It is one of the causes of leaky, abnormal blood vessels. The excess fluid that comes from these blood vessels can build up and lead to reduction in your vision.

Beovu is designed to block VEGF. By blocking VEGF, Beovu may prevent damaged blood vessels from leaking fluid into the macula. It is given by a course of injections into the eye.

Long term, the number of injections will depend on how the ARMD responds to the treatment. Initially, it is going to be used as a switch agent for patients not responding to Ranibizumab (Lucentis) or Aflibercept (Eylea). However, it is licensed for use as a first agent in newly diagnosed wet age-related macular degeneration (wet ARMD).

It works by penetrating into the nerve layer at the back of the eye (the retina). The macula is the most important part of the retina and is responsible for your central vision. Over time, the injections close up the leaking blood vessels affecting the macula, which should reduce the swelling in the macula and hopefully improve your vision.

Since 2008, we have been using Ranibizumab (Lucentis) for the treatment of wet ARMD. In 2013, Aflibercept (Eylea) was approved by The National Institute for Health and Care Excellence (NICE) for this condition. Brolucizumab (Beovu) was licensed in the USA in 2019. It was approved by the Scottish Medicines Consortium in September 2020 and by NICE in February 2021.

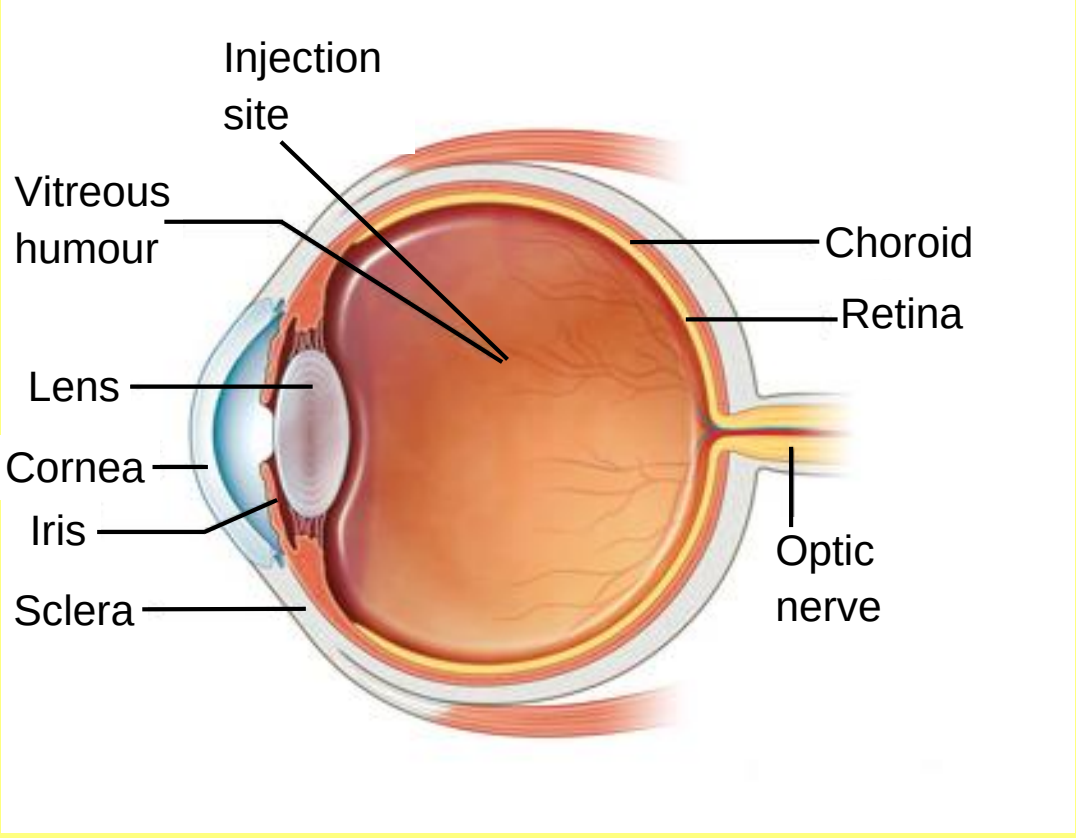


Figure 1 shows the side image of an eye (image courtesy of NHS Choices).

Although brolucizumab (Beovu) is equally as effective as Aflibercept (Eylea), in terms of vision improvement, trials* have shown that it has a better fluid clearing effect on the macula, and in half of the patients, the interval between injections can be safely maintained at three months after the loading dose.

You will be receiving three brolucizumab (Beovu) injections once every month for the first three months (this is called a loading dose). This will be followed by, in more than half of the patients, a fixed regimen of an injection every three months, as decided by the clinician. You may be given Beovu more frequently depending on the response of the disease. In the subsequent years, the injection is given as and when required. The number and frequency of the injections and the overall duration of treatment depends on the diagnosis and severity of the condition. Many patients have to have the injections for up to three years or longer. Your doctor will choose and discuss the treatment plan (regimen) best suited to your eye.

## How long am I consenting for treatment?

You will be given an indefinite course of treatment unless you withdraw consent or lose capacity.

## What happens during the treatment?

You should not feel any pain during the eye injections as your eye is numbed with anaesthetic drops prior to the injections. You may feel some pressure on your eye. You will not need to stay in hospital.

## After the treatment

You can take a couple of paracetamol tablets (500mg) in the morning of the injection or afterwards (if not allergic) if necessary.

Please continue to take any other eye drops that you already use (e.g. for glaucoma or dry eye). After the injection, the eye will be covered by an eye shield to prevent corneal scratch / abrasion. Please keep the shield on the eye until the next morning.

## Will my vision improve with the injection?

Trials over a two year period have shown that Beovu, like Eylea, helps to improve vision in the majority of users by five to six letters of the eye chart from baseline***.**

## What are the benefits?

Beovu is better than Eylea at reducing vascular leakage and fluid levels in the macular area to stabilise and improve vision*.

## What are the risks of having the injections?

- Eye pain (five per cent)
- Blurred vision (seven per cent)
- Vitreous floaters (five per cent)
- **Uveitis, including blinding retinal vasculitis (four per cent)**
- Retinal haemorrhage (four per cent)
- Retinal tear (one per cent)
- Cataract (seven per cent)
- Sub-conjunctival haemorrhage (seven per cent)
- Corneal scratch (1.5 per cent)
- **Infection, including blinding endophthalmitis (one in 500 cases)**

## What are the alternatives?

Currently, the other licensed and NICE approved treatments for wet ARMD, apart from Beovu, are Eylea and Lucentis intravitreal injections.

## Is there any reason why I cannot have the injection?

- The injections cannot be given to people who have had a stroke, mini-stroke (transient ischaemic attack, also known as TIA) or heart failure in the past three months.
- They will not be used in the presence of infection / inflammation in or around the surrounding tissues of the eye.
- They will not be used in those with a history of or ocular signs of previous inflammation (uveitis) or moderate to severe glaucoma.
- They will not be used 28 days prior to or after other intraocular surgery.
- The injections are unsuitable in pregnancy and breastfeeding women.

- Additional support may be needed for patients who may find local anaesthetics difficult to tolerate due to dementia / cognitive impairment. In this case, alternative solutions will be discussed with the patient and those who support them.

### ‘One Stop Service’

The Trust is introducing a ‘One Stop Service’ for some intravitreal injections. A ‘One Stop Service’ is where an injection may be offered on the same day that you attend the eye clinic. This may result in you having an extended waiting time in clinic, but it will mean that you do not have to return on a separate occasion for your eye injection. A doctor or nurse will discuss this with you in the clinic.

# Advice after eye injections

### What should I expect after the injection?

Your eye may feel painful for 24 to 48 hours. If necessary, you can take painkillers such as paracetamol or ibuprofen if you can take them (always read the label; do not exceed the recommended dose). If the eye becomes significantly red and painful with reduced vision, contact the **Urgent Referral team** immediately on **01384 456111 ext. 3633.**

It is best to avoid products containing aspirin. However, if you take regular soluble aspirin (75mg), you can continue to take it as advised by your GP.

If you have bruising on or around the eye, this should fade gradually over the next couple of weeks.

At times, a tiny air bubble can be introduced into the eye during the injection. This appears as a round, dark floater in the centre of your vision the day after the injection. Do not be alarmed, as this will get smaller and should disappear within 48 hours.

Rarely, the surface of the eye can get scratched during the injection process. This can cause sharp, sudden pain three to six hours after the injection.

If this happens, it is easy to treat, so please get in touch with the **Urgent Referral team** at Russells Hall Hospital Eye Clinic on **01384 456111 ext. 3633** (9am to 4.30pm, Monday to Friday).

## What do I need to do?

If you have an eye pad to prevent the cornea from being scratched or damaged, you can gently remove this the next morning. The eye pad may be slightly bloodstained, but this is nothing to worry about.

You can clean your eye the morning after your injection with cool, boiled water and a small piece of cotton wool or lint. Close your eye first, and then gently wipe from the inner corner of the eye to the outer corner of the eye, using a fresh piece of cotton wool or lint each time and for each eye.

If you were prescribed antibiotic drops to use at home, continue to use them for five days. If you have been prescribed glaucoma eye drops, you should use them on the morning of the injection, but not after the injection for the rest of that day. The next day you should start your glaucoma eye drops again using a new bottle.

## What if I have any problems or questions after reading this leaflet?

Please contact the **Urgent Referral Clinic** team at Russells Hall Hospital Eye Clinic on **01384 456111 ext. 3633** (9am to 4.30pm, Monday to Friday).

## Eye emergency, out of hours

In case of an eye emergency after the closing hours of the Eye Clinic at Russells Hall Hospital (including weekends and bank holidays), please contact:

**Birmingham and Midland Eye Centre on 0121 507 4440**
The doctor on call is usually based at the Eye Centre, City Hospital, Dudley Road, Birmingham. They may need to call you back, and if necessary, they will arrange for you to visit them.

## Where can I find out more?

**You can find out more from the following web-link:**

**NHS Choices**
http://www.nhs.uk/Conditions/Macular-degeneration/Pages/introduction.aspx

**Note:** the information in this booklet is provided for information only. The information found is **not** a substitute for professional medical advice or care by a qualified doctor or other health care professional. **Always** check with your doctor if you have any concerns about your condition or treatment. This is only indicative and general information for the procedure. Individual experiences may vary and all the points may not apply to all patients at all times. Please discuss your individual circumstances with your eye doctor.

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## *Reference:

HAWK and HARRIER: Phase 3, Multicenter, Randomized, Double-Masked Trials of Brolucizumab for Neovascular Age-Related Macular Degeneration
Dugel PU, Koh A et al
Ophthalmology 2020 Jan;127(1):72-84

## Further Reading:

Dugel PU, et al. Ophthalmology. 2020;127(1):72–84
Dugel PU, et al. Ophthalmology. 2021;128(1):89–99
Monés J, et al. Ophthalmology. 2020; S0161- 6420 (20) 31075-7

**This leaflet can be downloaded or printed from**
http://dgft.nhs.uk/services-and-wards/ophthalmology/

**This leaflet can be made available in large print, audio version and in other languages, please call 0800 073 0510.**

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