

# Long-term Efficacy of 0.19 mg Fluocinolone Acetonide Intravitreal Implant (Iluvien®) in the Management of Macular Oedema Secondary to Branch Retinal Vein Occlusion

Emma Fiddimore<sup>1</sup>, Lewis Larkman<sup>1</sup>, Mohanad Moustafa<sup>1</sup>, Tara Gaur<sup>2</sup>, Amit Gaur<sup>1</sup>

<sup>1</sup> Ophthalmology Department, Cwm Taf Morgannwg University Health Board. <sup>2</sup> School of Medicine, University of Leeds.

## BACKGROUND

**Fluocinolone acetonide (Iluvien®**, Alimera Sciences) is a sustained-release intravitreal corticosteroid implant licensed in the UK for **diabetic macular oedema (DMO) and recurrent uveitis**. It releases corticosteroid at ~0.2 µg/day **for up to 36 months**.<sup>1</sup>

Macular oedema is the **primary cause of vision loss** in **Branch Retinal Vein Occlusion (BRVO)**, driven by inflammatory cascades including VEGF, IL-6, IL-8 and MCP-1 release.<sup>2</sup> Current licensed management options include:

- Intravitreal anti-VEGF: <sup>3</sup> (aflibercept, bevacizumab, ranibizumab) 1<sup>st</sup> line
- Adjunctive/grid laser in selected cases
- Slow-release corticosteroid implants (e.g. dexamethasone implant, Ozurdex®)<sup>4</sup>, particularly in suboptimal anti-VEGF responders.

## Rationale

**Iluvien® is not currently NICE-endorsed for BRVO. Repeated injections carry cumulative risk of complications (endophthalmitis, retinal detachment, vitreous haemorrhage)<sup>5-7</sup> - a longer-acting corticosteroid implant may offer clinical benefit in certain refractory cases of RVO.**

## THE CASE & OUTCOMES

63-year-old male · left infero-temporal BRVO · PMH: MI, hypertensive, non-diabetic  
Presenting visual acuity = **89 letters (ETDRS) RE, 56 letters LE**

### Refractory Macular Oedema – Pre-Iluvien Treatments over 9 years:

**Bevacizumab (Avastin®, Genentech)**  
7 intravitreal injections over a year - initial response (BCVA 85 letters) with subsequent diminishing efficacy, (BCVA 15 letters)

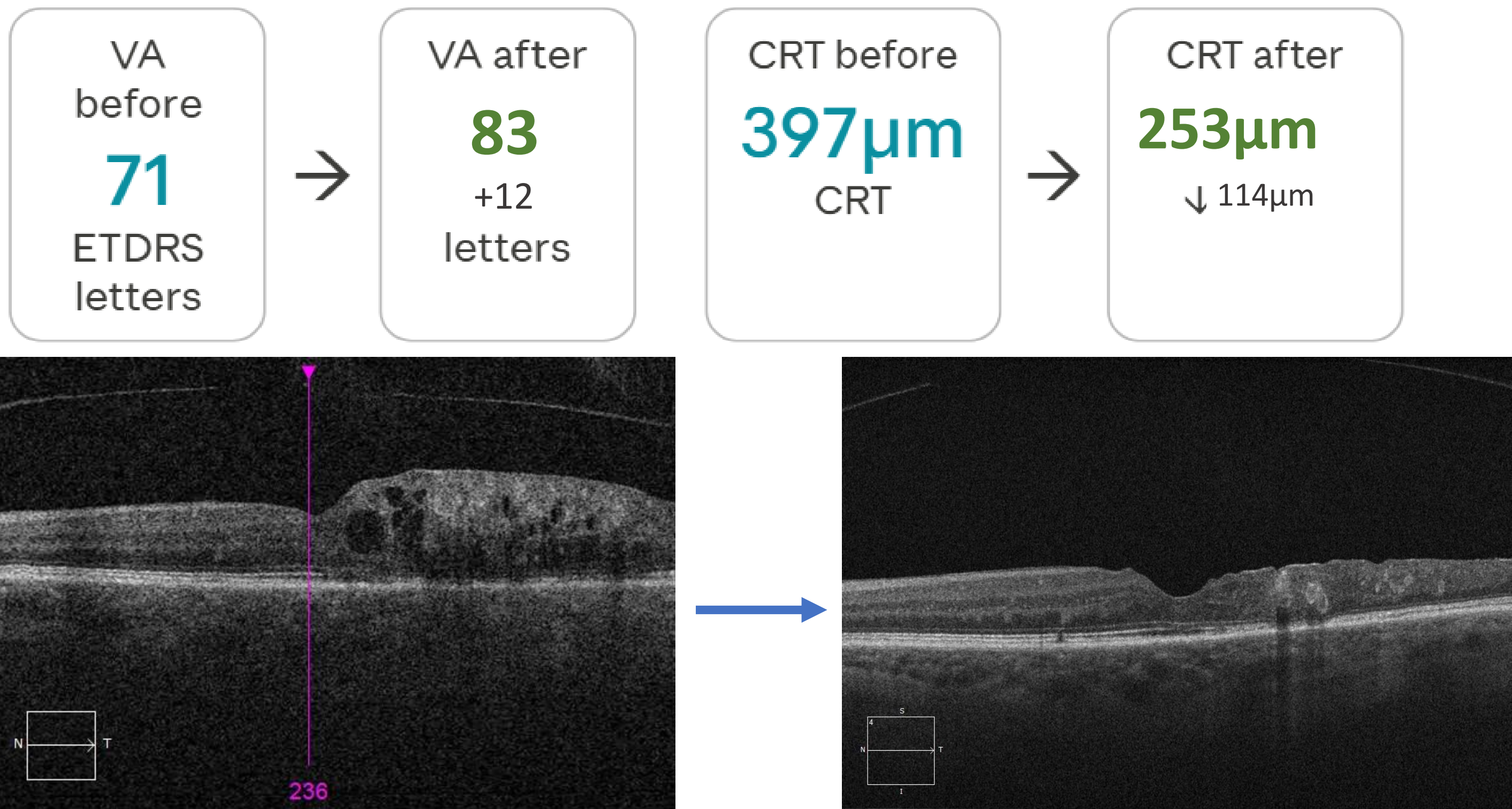
**Dexamethasone (Ozurdex®, AbbVie)**  
15 implants over 8 years - initial efficacy, then waning response with oedema recurring every 4 months. Adjunctive macula grid laser also utilised.

**Complications:** steroid-induced cataract & raised IOP - requiring surgical + medical intervention.

Persistent oedema despite **22 prior intravitreal treatments** - alternative options considered.

Received single **off-label treatment with Iluvien®** September 2022, with favourable outcomes for oedema and visual acuity over **3 years of follow-up**.

### Pre and Post-Iluvien® Outcomes - 3 Year Review



## DISCUSSION

**Existing Evidence for Iluvien® in RVO** Limited data - only 3 cases reported:

#### Coelho et al. 2019 – CRVO<sup>8</sup>

1 pseudophakic patient. VA improvement >15 letters. CRT: 578→393µm at 12 months. IOP maintained on medication.

#### Ribeiro et al. 2021 - CRVO & BRVO<sup>9</sup>

BRVO: Complete macular oedema resolution at 12 months. CRT 198µm, VA 38 letters. CRVO: Significant sustained improvement. CRT 271µm, VA 38 letters at 12 months.

### Ozurdex® vs Iluvien® Comparison<sup>1,4</sup>

| Feature              | Ozurdex®     | Iluvien®        |
|----------------------|--------------|-----------------|
| Treatment duration   | 4–6 months   | Up to 36 months |
| Approximate cost     | £870/implant | ~£5,500/implant |
| NICE approval (BRVO) | 2nd/3rd line | Off-label       |

### Other Considerations

Patient was pseudophakic at time of Iluvien® insertion.

Reduced injections may decrease cumulative procedure-related risk.<sup>5-7</sup>

Cost-effectiveness requires consideration in context of treatment frequency.

Larger prospective trials are needed to establish efficacy, safety and cost-effectiveness

## CONCLUSION

A single Iluvien® implant **has delivered three years of sustained clinical benefit** in a patient with persistent macular oedema following BRVO, refractory to all prior intravitreal treatments over 9 years.

## REFERENCES

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