

2RT[®]

Retinal Rejuvenation

2RT FOR EARLY AMD: CASE STUDY 2

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81-year old female patient with bilateral confluent soft drusen and pigmentary change. Past history of bilateral cataract surgery. MAIA macular function assessment indicated significant functional defect at majority of sensitivity points. Treatment with 2RT[®] resulted in drusen resolution and concurrent improvement in BCVA and contrast sensitivity.

PRE-TREATMENT STEPS: MAIA

MAIA microperimetry was applied in customized expert mode over the 1-6° field.

Test conducted prior to 2RT and follow-up 4/12 post 2RT (refer to Table 1).

TREATMENT STEPS: 2RT

Average treatment power was 0.30 mJ (refer to Table 2.)

12 laser spots were delivered in a circle outside the macula, with laser spots not observable on color fundus.

TREATMENT OUTCOME

At 9/12 post 2RT, clear resolution of drusen was observable on the OCT scan with concurrent improvement in MAIA sensitivity (refer to Figure 1-3). At 14/12 post 2RT MAIA threshold improvement was also noted (refer to Figure 2).

“2RT nanosecond pulse laser has demonstrated an effective intervention for drusen regression and improvement in macular function.”

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TABLE 1: MAIA PARAMETERS AND OUTCOMES

- **Examination Mode; Customized Expert Test with 36 stimuli surrounding the central (degree)**
- **Projection strategy: 4-2**
- **Average Sensitivity:**
21.9 Pre-Rx
24.6 post-Rx
- **Macular Integrity:**
99.8 Pre-Rx
88.9 Post-Rx
- **Fixation stability:**
Stable (P1=98%, P2=100%) Pre-Rx, Stable Stable (P1=90%, P2=98%) Post-Rx
- **BCVA:**
63% = 0.3⁰²
95% = 3.0⁰² Pre-Rx
63% = 0.7⁰²
95% = 05.9⁰² Post-Rx
- **Fixation Location (PRL): Central**
- **Test Duration:**
6' 4" Pre-Rx
5' 21" Post-Rx

TABLE 2: 2RT PARAMETERS

- **Wavelength: 532 nm**
- **Spot size on slit lamp adapter: 400 µm**
- **Contact lens: Volk Area Centralis**
- **Power (Ave): 0.30 mJ**
- **Exposure duration: 3 ns**
- **Application of circle outside the macula of 12 laser spots**

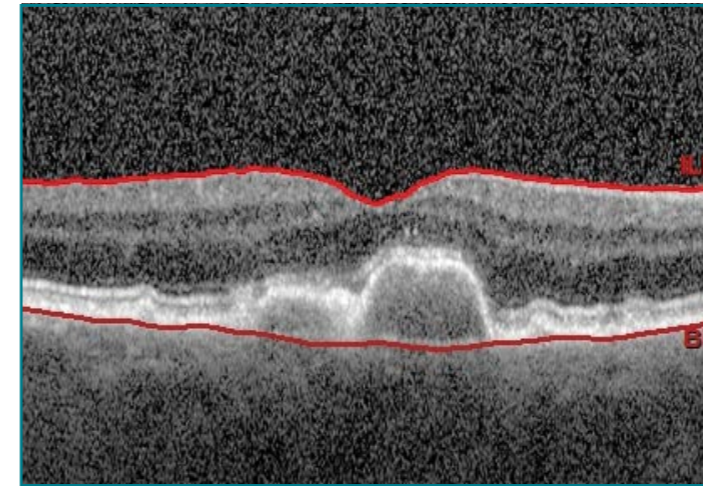


FIGURE 1: Pre-2RT

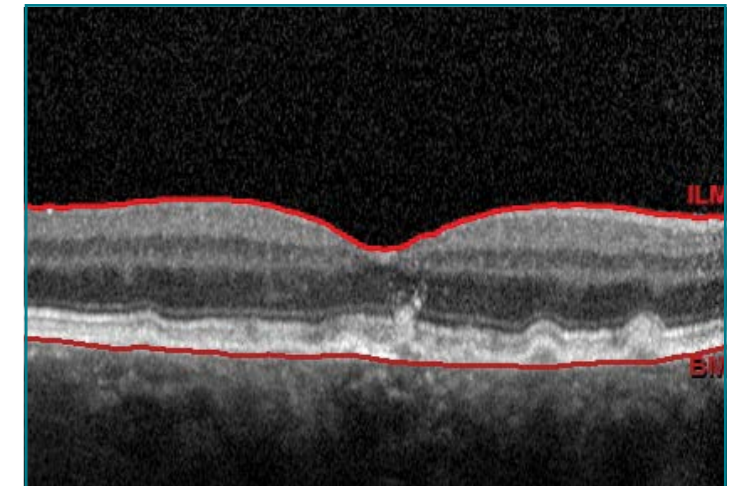


FIGURE 1: 9/12 Post -2RT

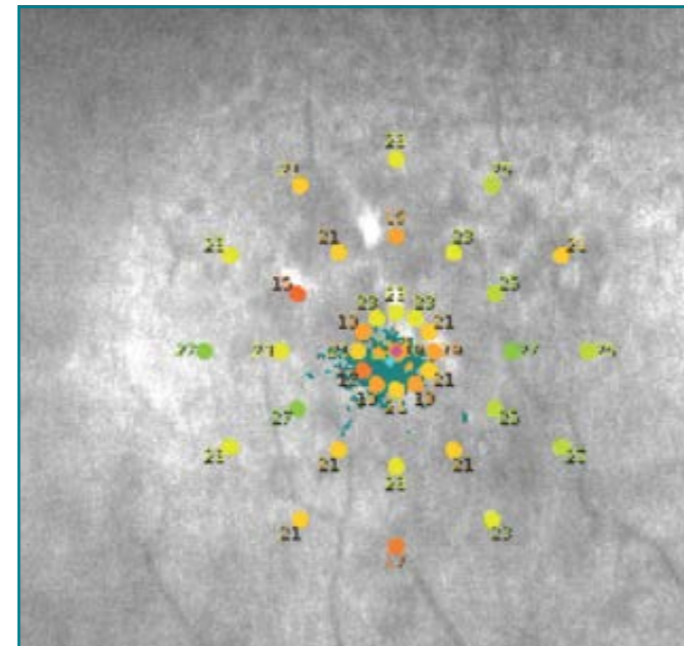


FIGURE 2: Pre-2RT

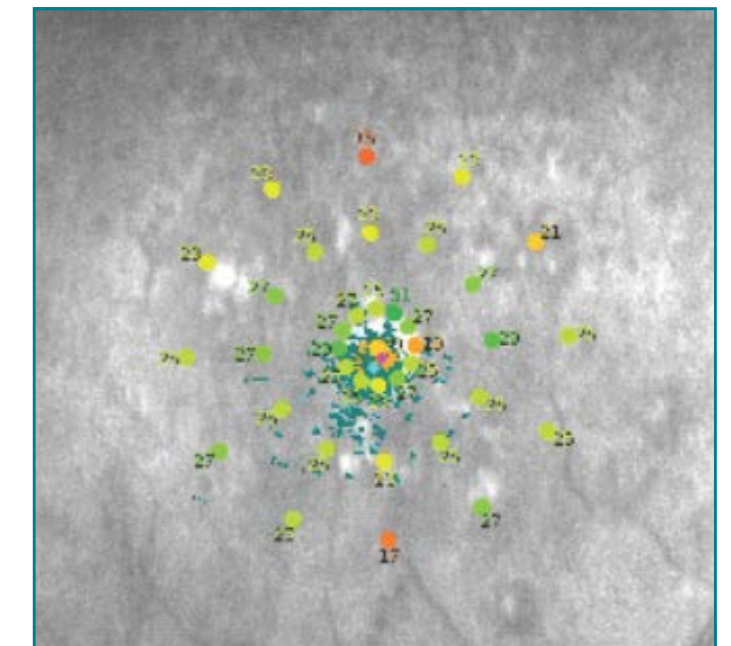


FIGURE 2: 14/12 Post-2RT

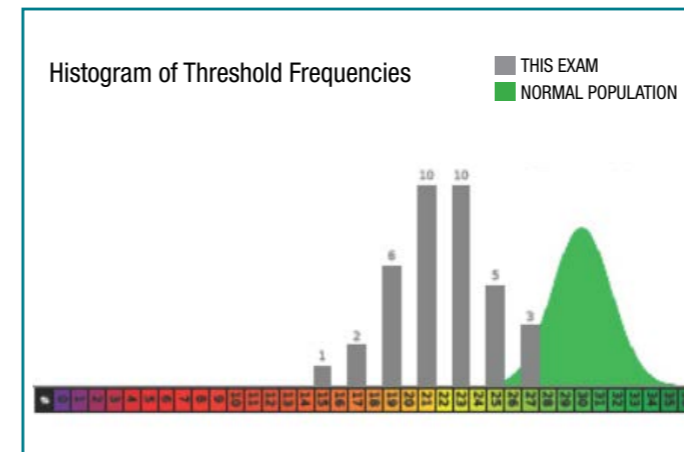


FIGURE 3: Pre-2RT

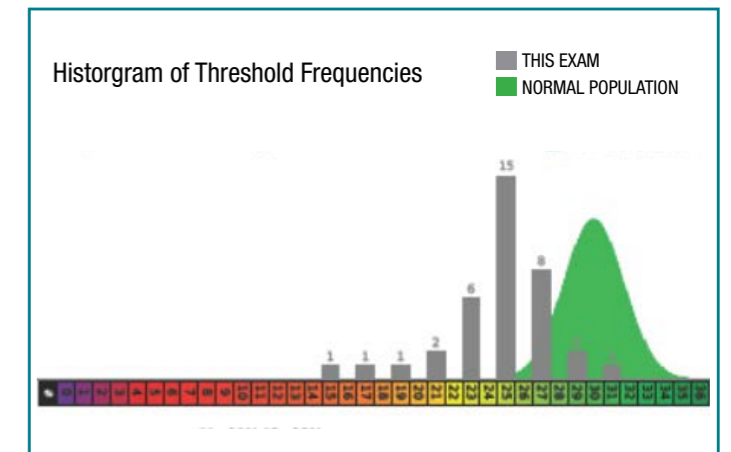


FIGURE 3: 14/12 Post-2RT

ABOUT 2RT

Retinal Rejuvenation Therapy

A non-thermal laser therapy, Retinal Rejuvenation Therapy (2RT®) stimulates a natural, biological healing response in patients with early Age-Related Macular Degeneration (AMD). Clinical and scientific studies have demonstrated the ability of 2RT® to improve retinal function and to halt or delay the degenerative processes that cause retinal disease. Specifically, 2RT® has been shown to reduce drusen and can produce bilateral improvements in macular appearance and function in high-risk early AMD patients.(1)

2RT® utilizes solid-state, nanosecond laser technology delivered through a patented beam profile. This breakthrough treatment approach selectively targets individual organelles (specialized cells) within the retinal pigment epithelium (RPE) in order to induce a therapeutic effect without causing thermal damage to the underlying Bruch's membrane and overlying photoreceptors.(2)

1. Guymer, R.H., et al., Nanosecond-laser application in intermediate AMD - 12-month results of fundus appearance and macular function. Clin Experiment Ophthalmol. 2013 Oct 3. doi: 10.1111/ceo.12247)
2. I. Jobling et al., "Nanosecond Laser Therapy Reverses Pathologic and Molecular Changes in Age-Related Macular Degeneration without Retinal Damage," The FASEB Journal 29, no. 2 (February 1, 2015): 696–710, doi:10.1096/fj.14-262444.

ABOUT THE PHYSICIAN

David Worsley (MB. ChB. Dip. Obst. FRANZCO)

Dr. Worsley specializes in medical and surgical retina and was responsible for introducing vitreoretinal surgery to the Waikato Public Hospital in 1991. In private practice at Hamilton Eye Clinic, Dr. Worsley is also a visiting specialist at Waikato Public Hospital. He holds Clinics in both Thames and Whangamata in order to provide much-needed support to patients in the greater Waikato region. Dr. Worsley is a medical advisory board member for the Macular Degeneration New Zealand and Retina New Zealand.



Opinions and treatment technique presented in this case report are those of the contributing author.

2RT® has a CE Mark (Conformité Européenne) and is included on the Australian Register of Therapeutic Goods (ARTG) for the indication of early AMD, where it can produce bilateral improvements in macular appearance and function. It also has a CE Mark (Conformité Européenne) and US Food and Drug Administration (FDA) (510k) market release for the treatment of Clinically Significant Macula Edema (CSME).

PB2RTCASE-AMD2. E&OE.



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