2RT FOR EARLY AMD: CASE STUDY 1
Christopher Kiss, PhD (Austria)

84-year old female patient with large confluent soft drusen with few hyperpigmented areas. Some drusen calcified. Drusen located directly foveal. Advanced AMD noted in fellow eye. Significant functional defect at majority of sensitivity points, as per MAIA macular function assessment. Treatment with 2RT® resulted in increased BCVA and contrast sensitivity and marked reduction in drusen.
**PRE-TREATMENT STEPS: MAIA**

MAIA micropolarimetry 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 0.29 mJ (refer to Table 2.)

To determine treatment power, titration shots were applied outside the arcades at an initial dose of 0.20 mJ. At the visual effect threshold i.e. "blanching", treatment power was set at 0.29 mJ (refer to Table 2).

24 laser spots were delivered, applied in a semi-circle arc above the macula. The laser spots were not observable on color fundus.

**TREATMENT OUTCOME**

A marked improvement in drusen resolution under the fovea was noted (refer to Figure 1, 2). BCVA improved from 6/9.5 to 6/7.5. MAIA macular function assessment indicated an improvement in macula integrity average threshold from 18.9 to 22.2, with sensitivity map illustrating an overall improvement (refer to Figure 3).

"For me this case clearly represents 2RT producing a benefit in macular function and appearance in patients with drusen and functional defects. I will continue to consider 2RT for further early intermediate AMD patients."

Christopher Kiss, PhD

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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**: 
  - 18.9 Pre-Rx
  - 22.2 post-Rx
- **Macular Integrity**: 
  - 100 Pre-Rx
  - 99.4 Post-Rx
- **Fixation stability**: 
  - Stable (P1=86%, P2=99%) Pre-Rx
  - Stable (P1=89%, P2=97%) Post-Rx
- **BCVA**: 
  - 63% = 1.7±2
  - 95% = 5.1±1 Pre-Rx
  - 63% = 0.0±2
  - 95% = 0.0±1 Post-Rx
- **Fixation Location (PRL)**: Central
- **Test Duration**: 
  - 4' 57" Pre-Rx
  - 7' 55" Post-Rx

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**TABLE 2: 2RT PARAMETERS**

- **Wavelength**: 532 nm
- **Spot size on slit lamp adapter**: 400 μm
- **Contact lens**: Mainster Grid
- **Power (Ave)**: 0.29 mJ
- **Exposure duration**: 3 ns
- **Application of semi-circle arc above and below macula of 24 laser spots**

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**FIGURE 1: Pre-2RT**

**FIGURE 1: 4/12 Post-2RT**

**FIGURE 2: Pre-2RT**

**FIGURE 2: 4/12 Post-2RT**

**FIGURE 3: Pre-2RT**

**FIGURE 3: 4/12 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)


ABOUT THE PHYSICIAN
Christopher Kiss, PhD (Austria)

Associate Professor Christopher Kiss is in private practice at "Eye & Auge". He commenced his ophthalmic career at the Vienna University Clinic of Ophthalmology and Optometry and also worked as a senior physician at the University Eye Hospital in Vienna (2010 - 2014). Additionally, he was the former director of the Study Center of the Department of Ophthalmology, Vienna University Clinics.

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).