

Difference Between Macular Telangiectasia Type 1 and Type 2

Macular Telangiectasia Type 1 (MacTel 1)

- **Etiology:** MacTel 1, also known as idiopathic macular telangiectasia, typically affects only one eye (unilateral).
- **Vascular Changes:** Characterised by dilated and leaky blood vessels in the macula, leading to swelling and the formation of aneurysms.
- **Patient Demographics:** More common in males and often diagnosed in middle-aged individuals.
- **Symptoms:** Patients may experience central vision loss, swelling (macular edema), and retinal hemorrhages.
- **Progression:** This type is relatively rare and progresses slowly.
- **Treatment:** Treatment often involves managing the macular edema, typically through laser photocoagulation or anti-VEGF injections.

Macular Telangiectasia Type 2 (MacTel 2)

- **Etiology:** MacTel 2 is a bilateral condition, meaning it affects both eyes.
- **Vascular and Neurodegenerative Changes:** Involves both abnormal blood vessel growth and degeneration of the retinal photoreceptors and supporting cells. It often shows a loss in the ellipsoid zone (EZ) of the retina.
- **Patient Demographics:** More common in females and usually diagnosed in people in their 40s to 60s.
- **Symptoms:** Patients experience distorted vision (metamorphopsia), central vision loss, scotomas (blind spots), and can develop atrophy of the retina over time.
- **Progression:** MacTel 2 progresses more slowly but consistently over time, leading to significant central vision impairment.
- **Treatment:** There is no cure, but treatments like revakinagene taroretcel (NT-501) aim to slow progression by preserving photoreceptor health. Other experimental treatments and supportive therapies focus on managing symptoms and slowing the disease's progression.

Key Differences

- **Laterality:** MacTel 1 usually affects one eye, while MacTel 2 affects both eyes.
- **Vascular Changes:** MacTel 1 is primarily characterised by vascular anomalies leading to macular edema, whereas MacTel 2 involves both vascular and neurodegenerative changes.
- **Demographics:** MacTel 1 is more common in males, while MacTel 2 is more common in females.

- **Symptoms and Progression:** MacTel 1 typically leads to macular swelling and retinal hemorrhages, whereas MacTel 2 causes progressive central vision loss with more significant photoreceptor degeneration.

Sources

- **American Academy of Ophthalmology:** Provides detailed information on the clinical features and treatment of MacTel 1 and 2.

- **Retina Society:** Offers comprehensive reviews and updates on the latest research and clinical trials for macular telangiectasia.

For more detailed information, you can visit the [American Academy of Ophthalmology](<https://www.aao.org>) and the [Retina Society](<https://www.retinasociety.org>).

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