

## Vision Repair – Age-related Macular Degeneration (AMD)

As the world's first clinical trial to use induced pluripotent stem cells launched amid sweeping regulatory changes in Japan, [Dr. Masayo Takahashi](#)'s treatment protocol for AMD has received no small amount of scrutiny. After a brief [hiatus](#), the trial was back on track earlier this year and Takahashi's presentation at this meeting was highly anticipated.



It did not disappoint. Takahashi spent the better part of her time outlining the steps taken to reach the point where the clinical trial was possible, including multiple studies in mice and further refinement of the treatment to ensure it would be stable in humans even with genetic changes over time. Given that one of the reasons the trial was put on hold was due to genetic mutations found in the cells prepared for the second potential human transplant, Takahashi's careful work in ensuring the product was safe bodes well for the future of this trial.

### Dr. Masayo Takahashi

The first patient was treated in 2014, a 78-year-old woman with wet AMD in the right eye, and although only minimal visual improvement was documented, the patient [anonymously told the \*Japan Times\*](#),

“I'm glad I received the treatment. I feel my eyesight has brightened and widened.”

Takahashi also alluded to some of the other challenges she'd had to overcome to make this trial a reality, including would-be critics who told her that the nervous system and the retina were too complicated to regenerate. Takahashi's response? “You don't know stem cells [and] you don't understand the needs of the patient.”

While it was unclear when the next patient will receive treatment, Takahashi did say that three new applications for clinical trials using her refined protocols have been submitted for approval.