

FOR IMMEDIATE RELEASE

Vision recovers faster and better using novel corneal transplantation technique

ROTTERDAM, Netherlands (Jan. 12, 2016) — Blurred vision, halos around lights, washed-out colors: these symptoms of corneal disease can be alleviated by a corneal transplantation. The operation has always been invasive and risky, however, often making it a last resort used only when a person's visual acuity is worse than 20/60. A new procedure developed by the Netherlands Institute for Innovative Ocular Surgery (NIIOS) is changing that.

NIIOS's novel surgical technique is known as DMEK: Descemet's membrane endothelial keratoplasty. In DMEK, only the diseased layer (or *lamella*) of the cornea is replaced by healthy donor tissue, instead of the entire cornea. The risks associated with this lamellar surgery are lower, and the eye heals more quickly and with better results. What's more, the healthy part of the eye is left undisturbed. All this makes it possible to perform a transplantation in a much earlier stage of corneal disease.

Bullous keratopathy and Fuchs endothelial dystrophy

The DMEK procedure is often used in patients with corneal conditions such as bullous keratopathy and Fuchs endothelial dystrophy. People in this last group often retain complete or nearly complete visual acuity, yet have serious difficulty seeing due to light scatter and other phenomena. Nonetheless, their vision is "too good" to qualify for a full-thickness corneal transplantation. DMEK is particularly valuable for these patients, whose visual problems significantly hamper their daily activities.

Back behind the wheel

Dutch truck driver Jan Spijkers underwent the DMEK procedure after he was diagnosed with Fuchs endothelial dystrophy. "Even though I had 20/20 vision, I could no longer drive my truck, particularly at night," Spijkers says. "It was like I was going blind, and there was no chance of recovery. Since the operation, I can see everything. After three days my vision was better than ever, and I'm back behind the wheel again."

Multinational team

The Melles Cornea Clinic, part of the NIIOS complex in Rotterdam, is tailored to foreign patients, many of whom can be served in their native languages. The clinic's multinational medical team contains cornea specialists from the Netherlands, Spain, Germany, Syria, the Philippines and Greece. To the extent possible, the clinic schedules foreign patients' consultation and surgery in a single appointment, so that only one visit is required.

NIIOS is an independent knowledge organization specializing in medical innovations for ocular surgery. Located in Rotterdam, NIIOS was founded in 2000 by ophthalmologist Gerrit Melles. Today, the institute is globally recognized as the leading center of expertise for lamellar corneal transplantation. NIIOS brings together a unique combination of organizations, each with its own expertise, including a tissue bank (the Amnitrans EyeBank) and treatment center (the Melles Cornea Clinic). See www.niios.com for more information.

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Rodríguez-Calvo-de-Mora, Marina, Ruth Quilendrina, Lianne Ham, Vasilios S. Liarakos, Korine van Dijk, Lamis Baydoun, Isabel Dapena, Silke Oellerich and Gerrit R. J. Melles. "[Clinical Outcome of 500 Consecutive Cases Undergoing Descemet's Membrane Endothelial Keratoplasty](#)." *Ophthalmology* 122 (March 2015):464–70.