

Markku Myllylä 7.9.2021

Diabetic Retinopathy Screening

OPTOMED

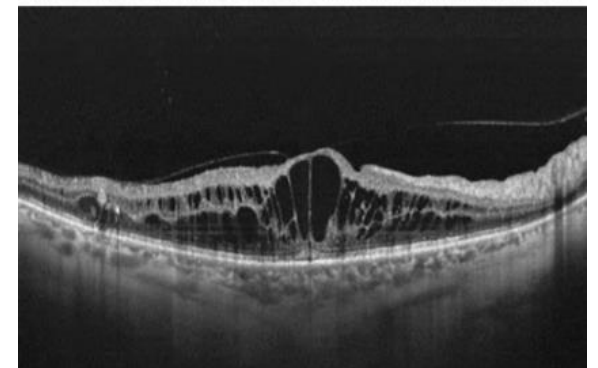
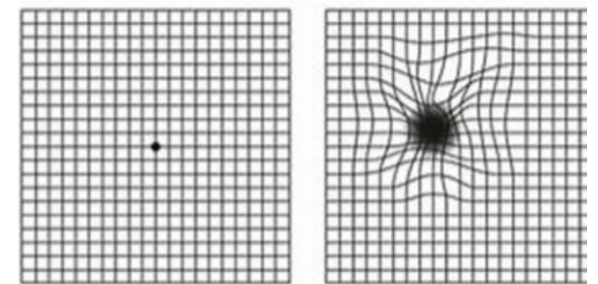
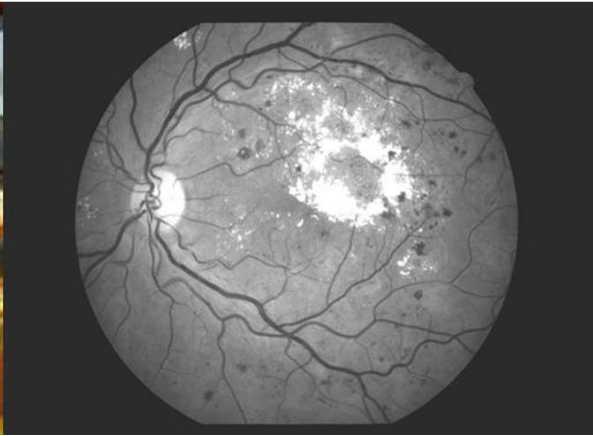




Optomed offers our customers leading fundus cameras and software solutions with integrated Artificial Intelligence (AI) for screening of blinding eye diseases



Diabetic Macular Edema (DME)



**Sight is our most
precious sense**

80%

of what we learn is through our eyes¹⁾

of people fear losing their sight more than any other sense²⁾

of visual impairments are preventable and treatable if discovered early³⁾

OPTOMED

Diabetic Retinopathy



**60% of pat's
have DR
after 20 years**

**33% of T2D
have DR when
diagnosed**

**20% of T2D
have DME *)
after 10 years**

OPTMED

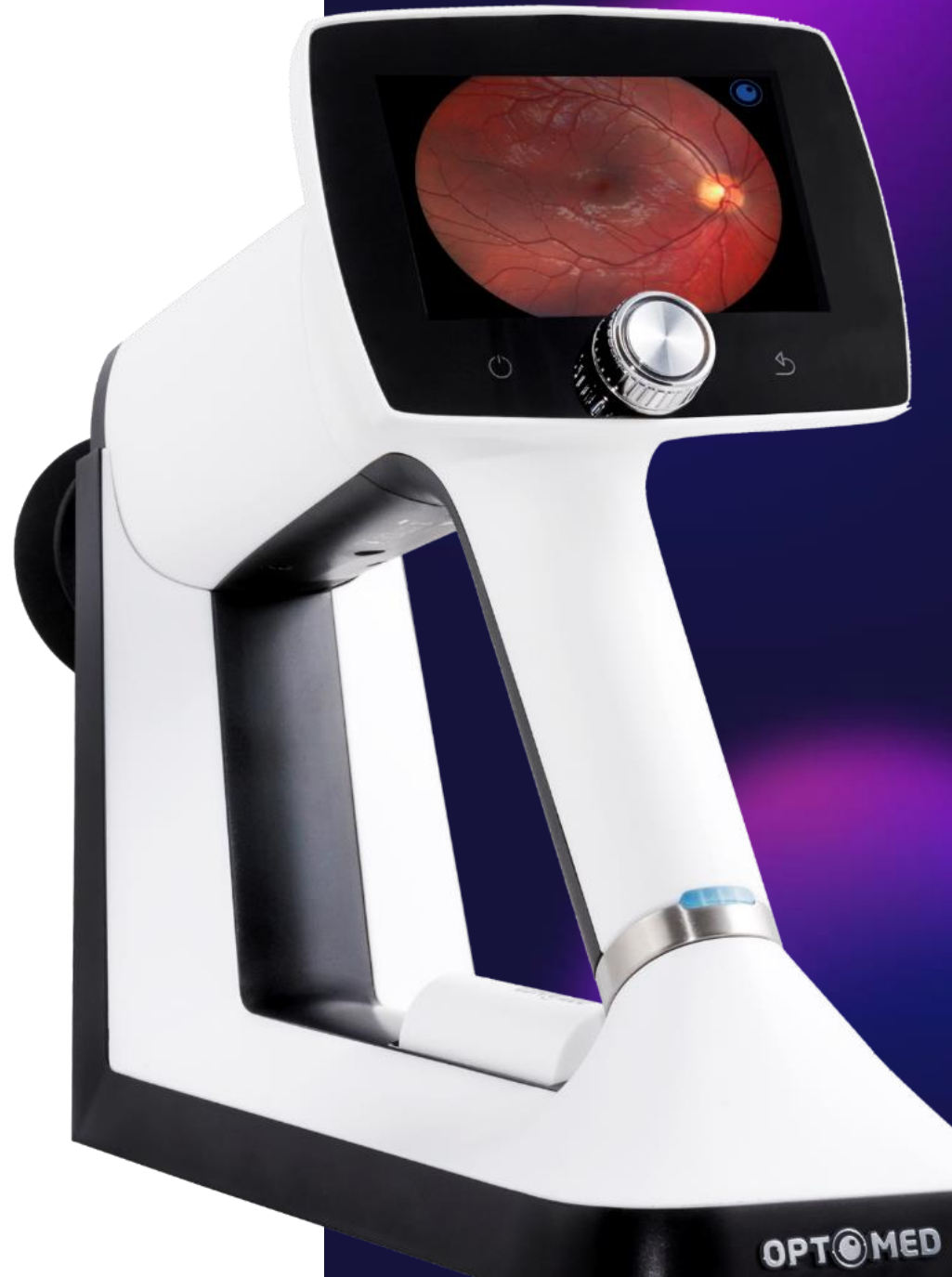
*) Diabetic Macular Edema
After 3-6 months loss of vision
Treatment with anti-VEGF injections
in two weeks benefits >80% of patients

Why Screening of non-symptomatic Patients?

- To save vision
- To save costs

A screening program for DR must be coupled with access to adequate and timely referral for ophthalmological care.

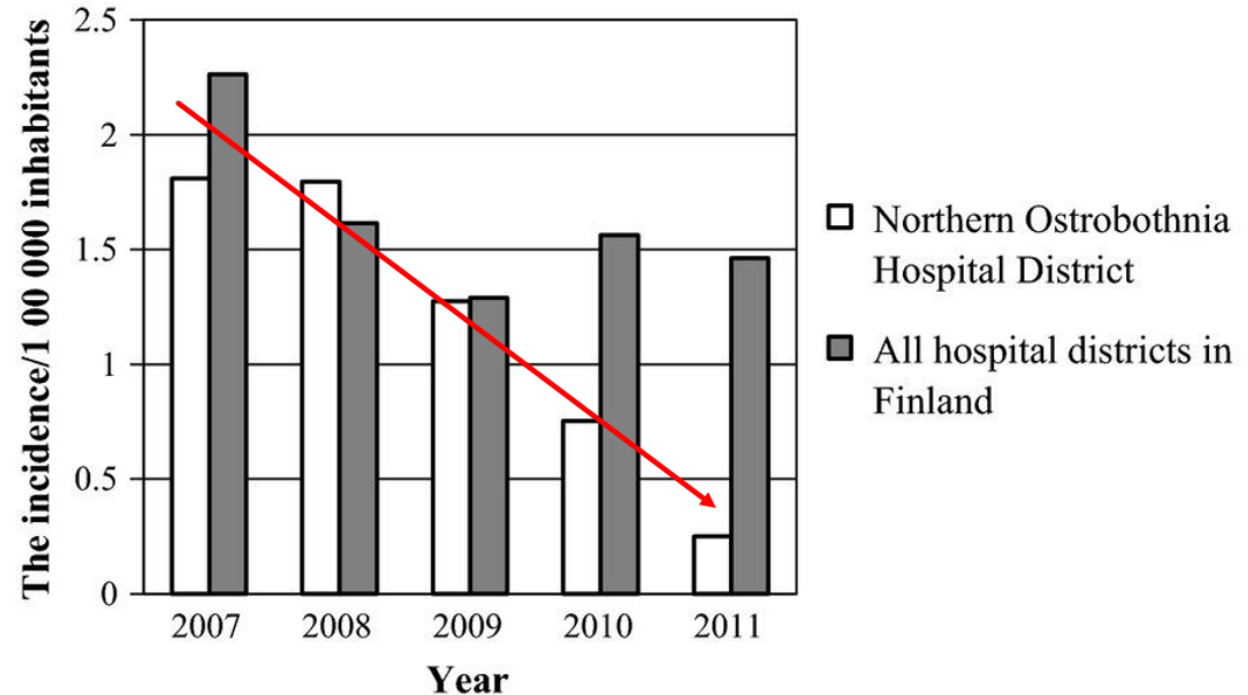
Luckily, progress of symptoms is normally relatively slow.



VISUAL IMPAIRMENT DUE TO DR IN NORTHERN FINLAND DURING 2007-2011

- The improvements in DR screening and care
 - High coverage of screening
 - No delays in the process
 - All images graded in a week
 - Rapid referral when needed
 - Timely treatment of severe DR
 - Novel treatment; early use of anti-VEGF drugs
- Quality Prize of the Finnish Association for Medical Doctors, 2012

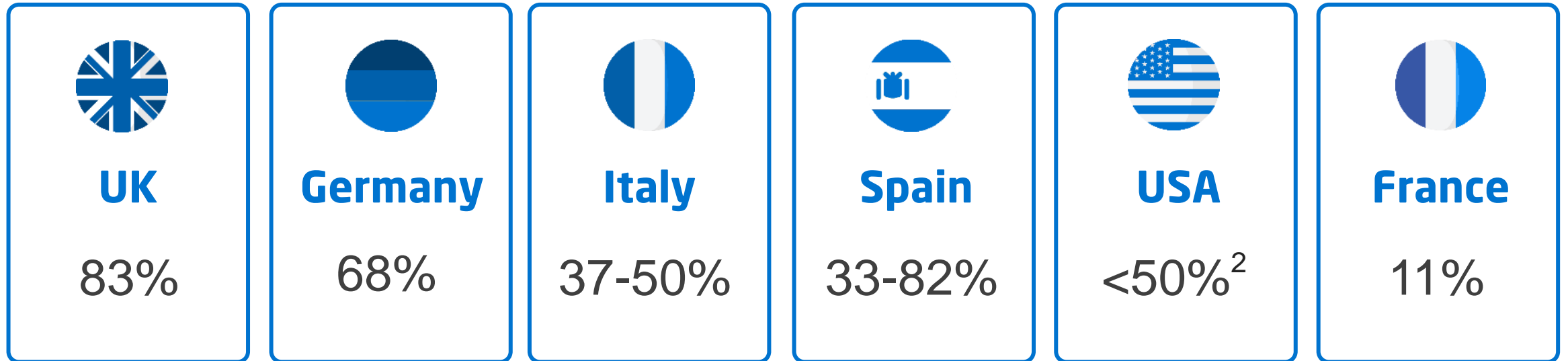
*86% decrease in visual loss
by efficient screening and timely treatment*



Source: Nina Hautala, member of Optomed Scientific Advisory Board,
Professor of Ophthalmology, Oulu University Hospital

Need for increased screening coverage

% of diabetics screened systematically¹



1) Source: Retinal Diseases in Europe: Prevalence, incidence and healthcare needs. University Eye Hospital Bonn (2017);

2) Source: Disparities in Adherence to screening guidelines for diabetic retinopathy in the United States: A Comprehensive Review and Guide for Future Directions, Fathy, C et.al

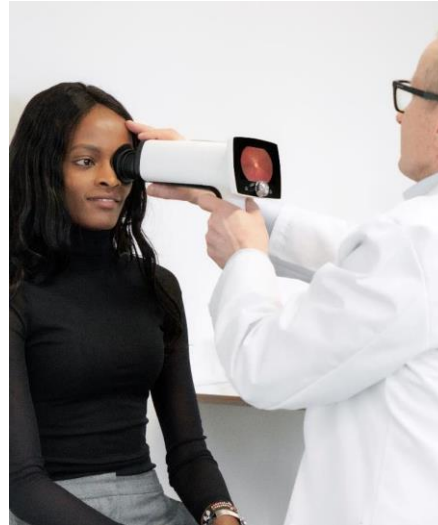
Transition from traditional desktop fundus cameras to AI integrated handheld cameras has started

Traditional equipment



Low screening coverage
Capacity constraints

Optomed's handheld camera...



Possibility to increase
Screening coverage

...together with AI



Possibility for increased
Volume capabilities

OPT@MED

Mild background retinopathy



No DR, healthy fundus



OPTOMED HANDHELD CAMERAS

Optomed Aurora IQ

Integrated Artificial Intelligence (AI)

- AI for identifying diabetic retinopathy, AMD and suspected glaucoma
- Results can be read from camera screen in minutes
- Affordable and fast way to perform retinal screening
- Can be taken to any health care clinic and integrated to hospital systems

OPTOMED



SELENA+

- Deep Learning System (DLS)
- Developed using
 - ~500'000 retinal images
 - Several ethnic groups & retinal cameras
 - Original reference Ting et al. JAMA 2017; 318(22): 2211-2223

OPT  **MED**





Conclusions

- Accessibility to eye-care is insufficient.
- Affordability is often an additional burden.

Optomed's handheld cameras with AI and telemedicine solutions help with these issues.

OPTMED

Optomed is a Valued
Supplier on the [IAPB](#)
Standard List



OPTOMED

CORPORATION

Optomed Plc. Yrttipellontie 1, 90230 Oulu, Finland
Tel: +358 20 741 3380 • Info@optomed.com
www.optomed.com

