

Okulomiikka ja Tekoäly

Kohti varhaisempaa
tunnistamista ja vaikuttavampia
hoitopäätöksiä

Laura Piila, VP Devices, Optomed

OPTMED

R3.0 TEM70002700



OPTOMED

Enabling Screening for All



Optomed is a market leader in cutting-edge handheld cameras.

20 years of innovation – over 20,000 delivered cameras World-wide to date.



Our **AI-powered screening solutions** aim to

- **empower early detection of disease**
- **transform diagnostic processes**
- **improve people's health**



Market Opportunity & Trends

Market Drivers



Growing Disease Prevalence

Diabetes, cardiovascular diseases



Healthcare Access

Need for early screening, in primary care, rural settings



Aging Population

Increased needs globally



AI Integration

Demand for automated analysis



Cost Efficiency

Reduce specialist referrals

Market Transition

From: Traditional desktop cameras with low screening coverage

To: AI-integrated handheld cameras with increased volume capabilities

First-Mover Advantage

First-mover advantage in AI-integrated handheld imaging



Product Portfolio - Enabling Screening for All

Fundus Imaging Devices

OPTOMED LUMO
Capturing Health



**Aurora
AEYE**



**Optomed
Aurora IQ**



**Optomed
Polaris**



**Smartscope
PRO**

AI-Powered Image Analysis

Integration of selected AI algorithms with Optomed cameras*

Aireen

ophTAI

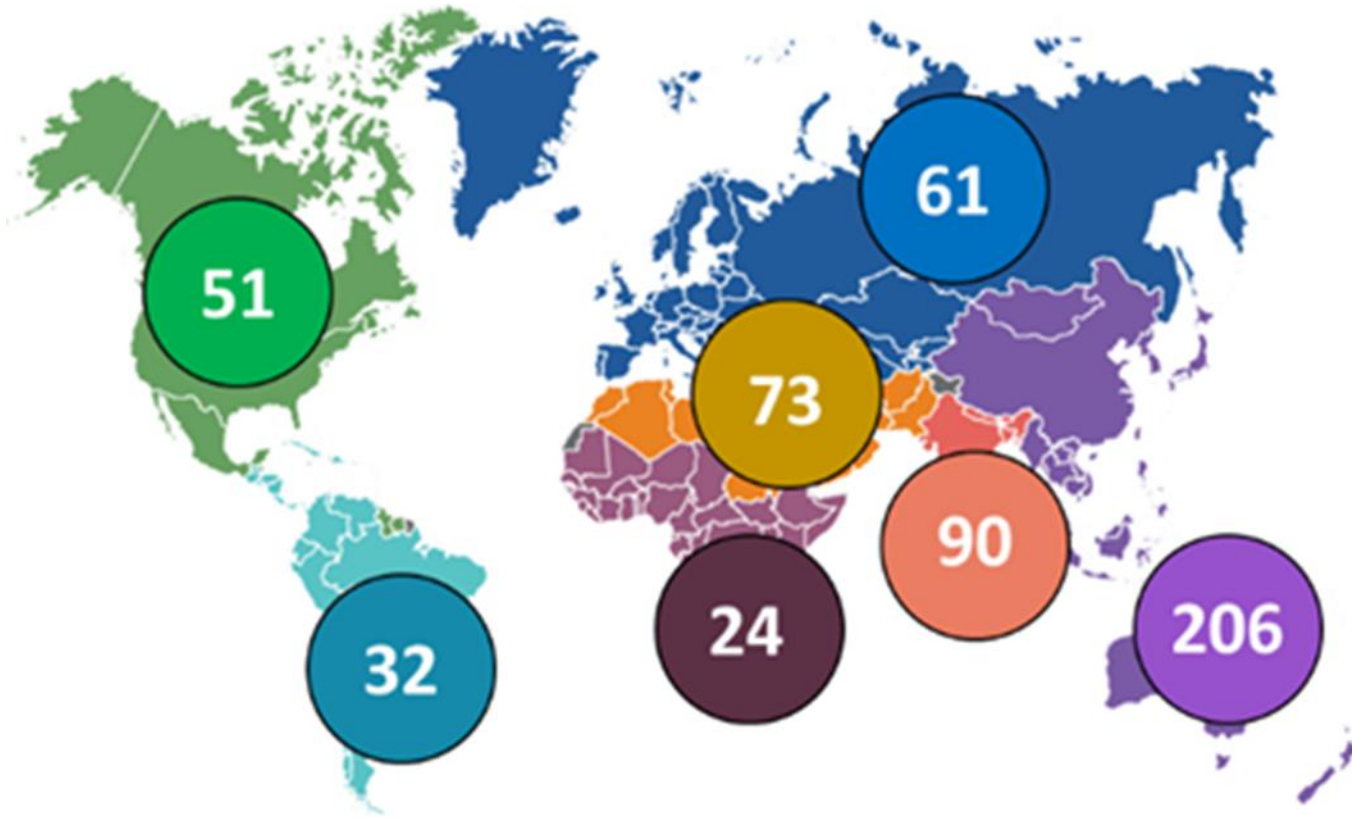
AEYE Health



**AI availability depending on the geographical region*

OPTOMED

Diabetes Around the World

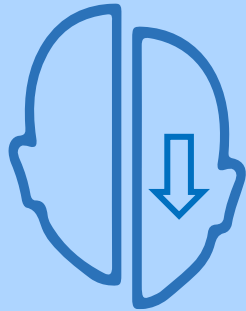


- 537 million adults aged 20-79—1 in 10—are living with diabetes.
 - This number is projected to rise to 643 million by 2030 and 783 million by 2045.
- Over three-quarters of adults with diabetes live in low- and middle-income countries.
- In 2021, diabetes caused 6.7 million deaths—equivalent to one death every five seconds.
- Diabetes led to at least USD 966 billion in health expenditures, a 316% increase over the past 15 years.
- 541 million adults have Impaired Glucose Tolerance (IGT), placing them at high risk of developing type 2 diabetes.

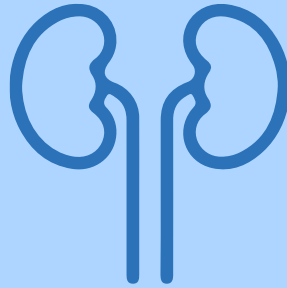
Diabetes-related Complications



Heart
Attack



Stroke



Kidney
Failure



Blindness



Lower-limb
amputation

Understanding Diabetic Retinopathy (DR)

Diabetic Retinopathy (DR):

- **Leading Cause of Vision Loss:** DR is the top cause of blindness in working-age adults (20-65 years).¹
- **At-Risk:** Both Type 1 and Type 2 diabetes patients are at risk.²
- **Mechanism:** Chronically high blood sugar damages retinal capillaries, causing leakage and blockage.

Risk Factors:

- **Duration:** Risk increases with longer diabetes duration.²
- **Glycemic Control & Blood Pressure:** Poor blood sugar and high blood pressure heighten DR risk.
- **Prevalence:** Over 50% of people with diabetes will develop DR.²

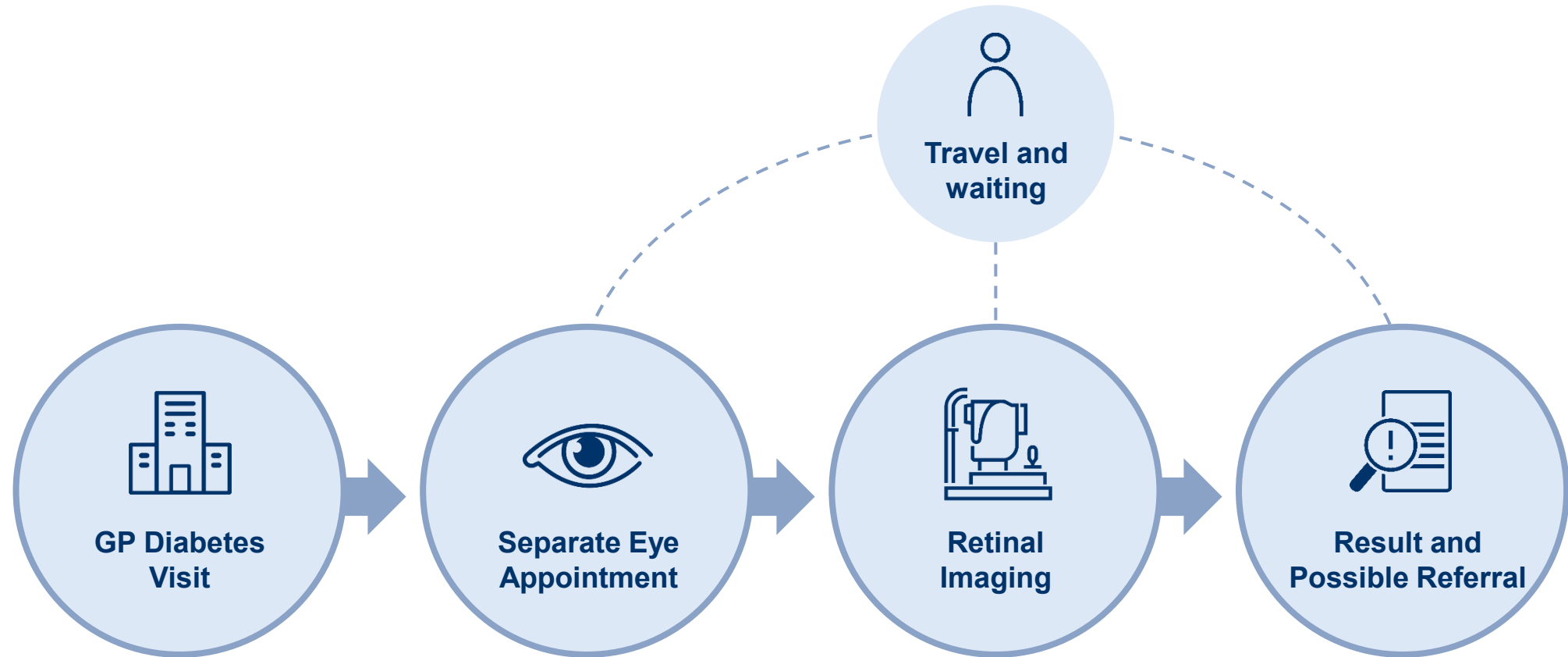


1. Kropp M, Golubnitschaja O, Mazurakova A, et al. EPMA J. 2023;14(1):21-42. doi:10.1007/s13167-023-00314-8.

2. NEI. Retrieved June 12, 2024, from <https://www.nei.nih.gov/learn-about-eye-health/eye-conditions-and-diseases/diabetic-retinopathy>.

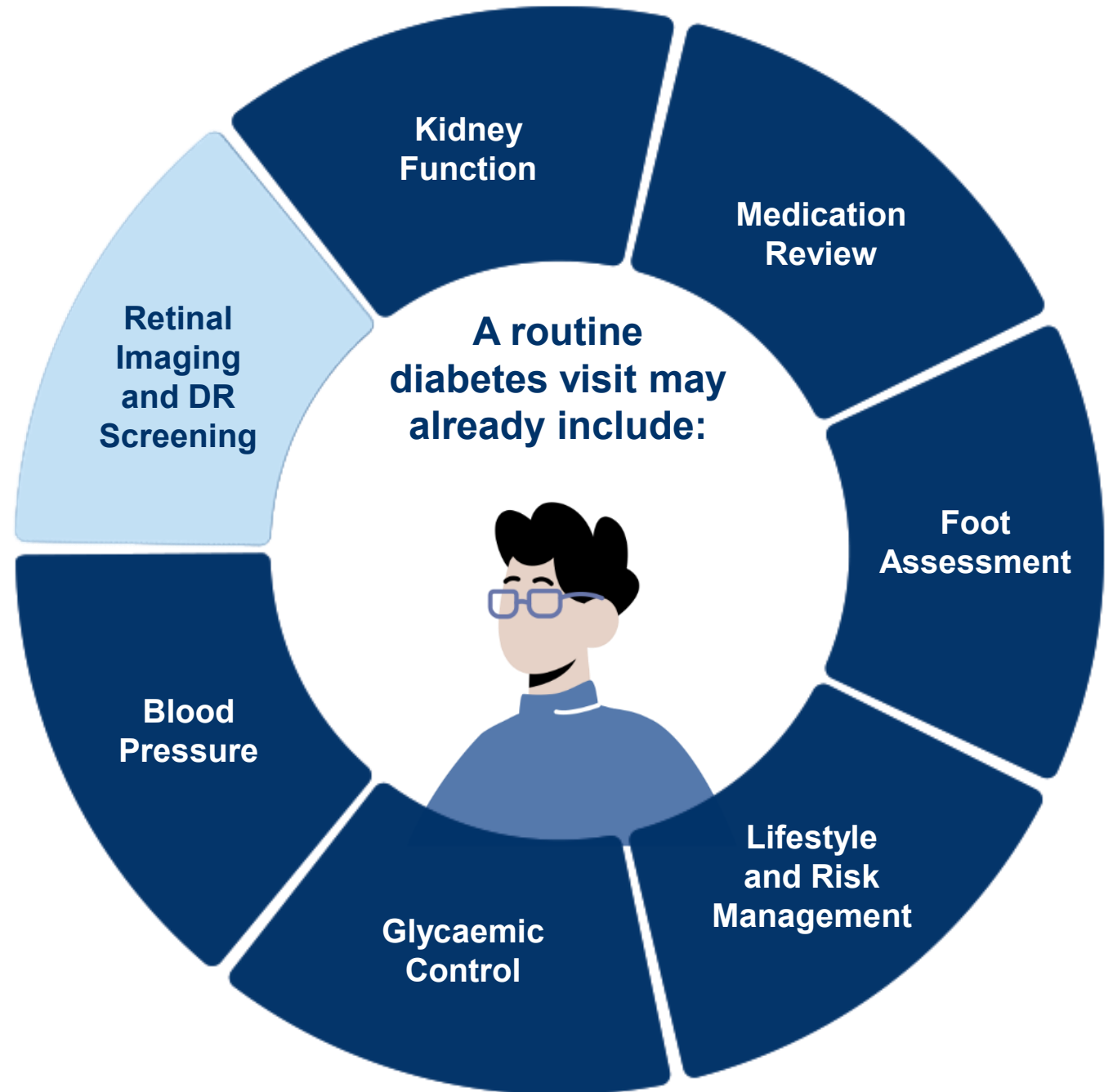
The Access Challenge

A patient should not need a journey to begin screening



The Patient is Already Here

Make **retinal screening** part of the diabetes care pathway, not a separate journey.



Retinal imaging where care happens



Ophthalmology
and Optometry



National screening
programs



Mobile screening
units



Primary care



Homecare

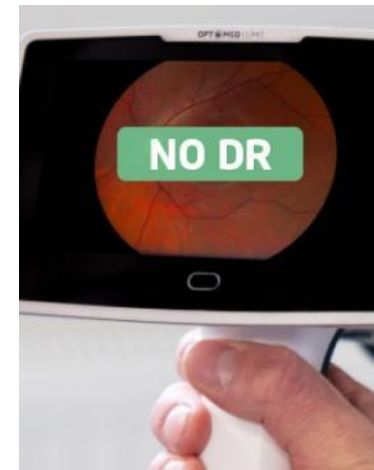


One image
per eye



AI result

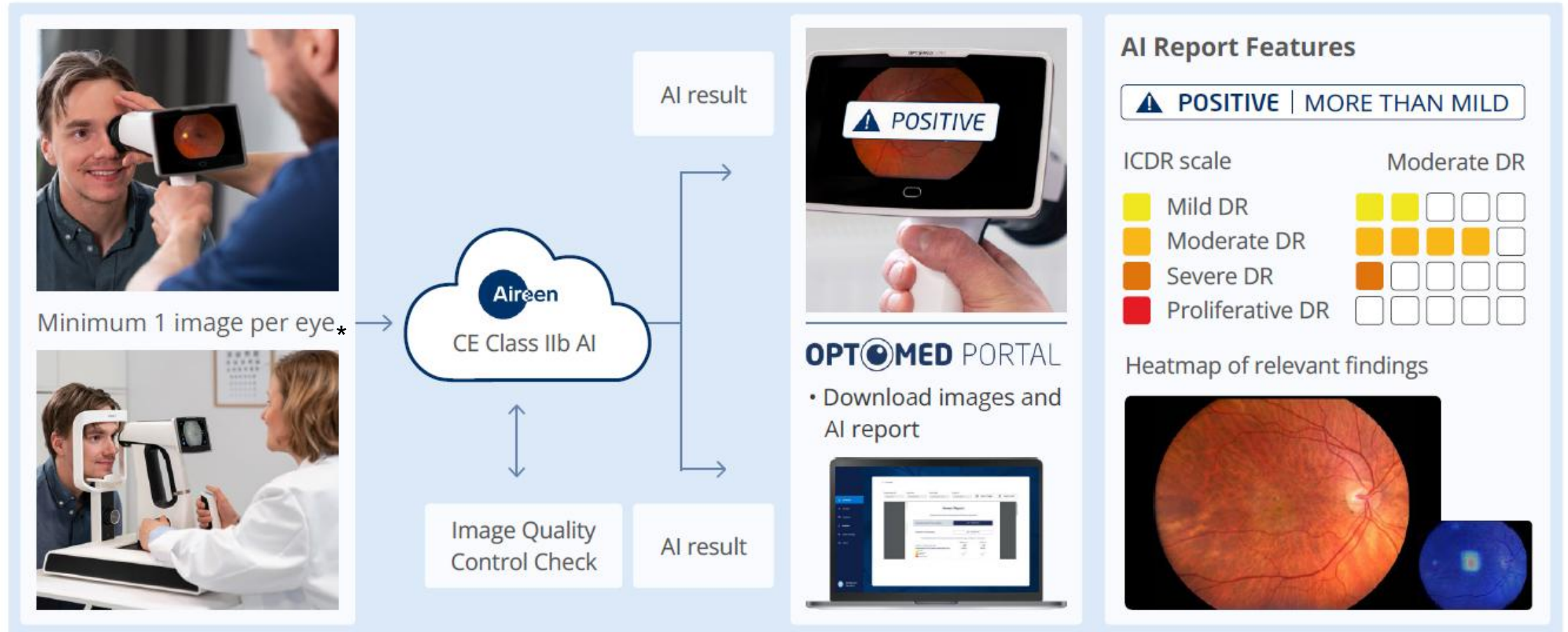
AI result



OPTOMED PORTAL

- Download images and AI report
- Integration to EMR

From Retinal Image to Referral



*Imaging workflow possibilities: 1-2 images/eye; possible to image one eye only

What Changes When Screening Moves Closer to the Patient?



Patient

- Screening closer to home
- Less appointments
- Timely referral to specialist care

GP Team

- More comprehensive diabetes care
- Better continuity across the care pathway



Eyecare Specialist

- More focused referral pathways
- More purposeful use of resources

Health System

- Screening coverage and access improved
- Flexible delivery models



Easy Access, Early Detection

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OPTOMED LUMO

**AI Screening for Diabetic Retinopathy,
with Clinically Validated Performance***

* Huhtinen P et al. Diabetes Technol Ther. 2025. doi:10.1177/15209156251369886

94.8%

Sensitivity

91.4%

Specificity

92.7%

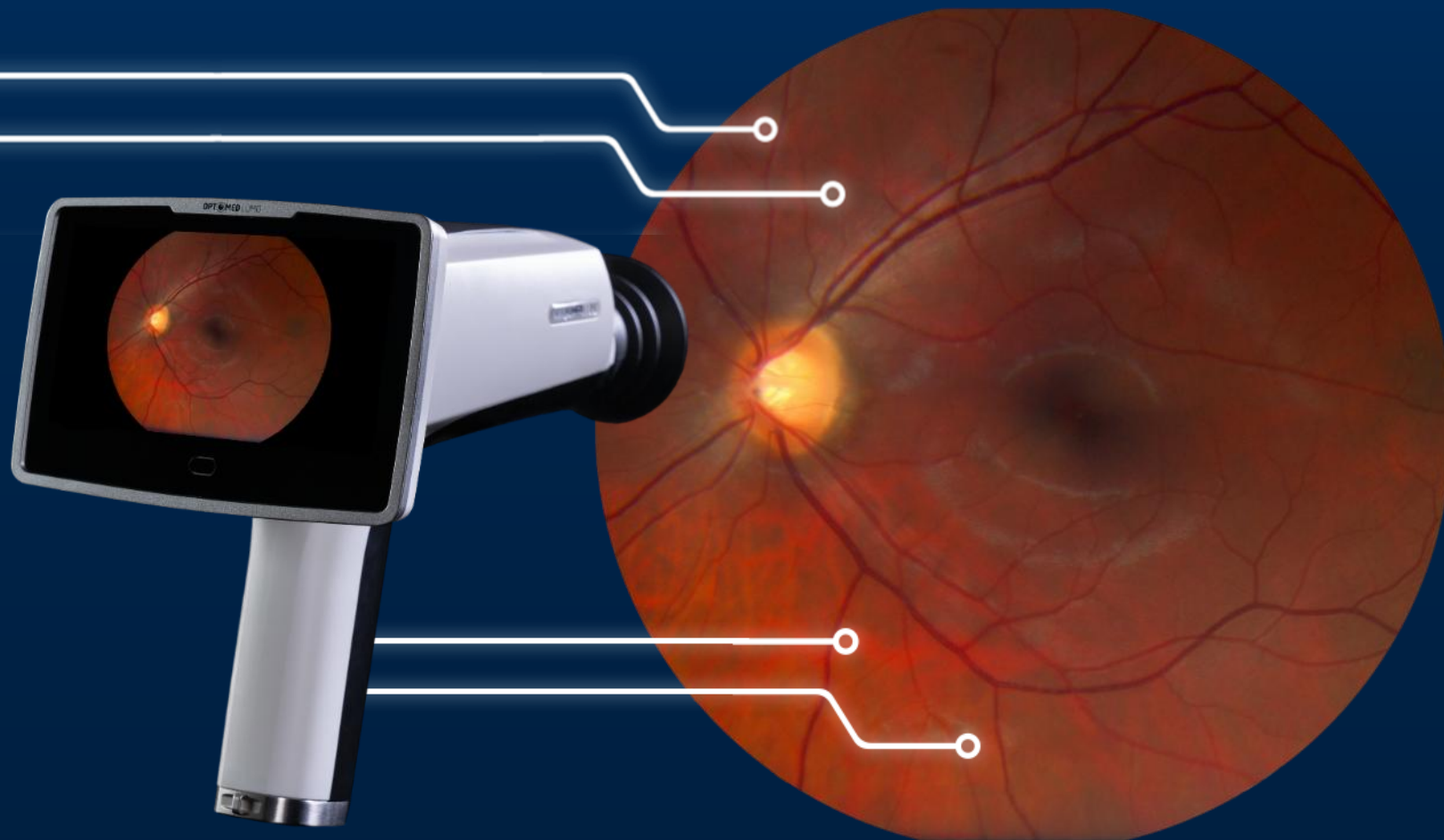
Diagnostic
Accuracy

OPTOMED x **Aireen**



Oculomics

Retinal Biomarkers for Systemic Health and Disease



DR

T1D: 50%
T2D: 25%



CVD

2-4* RISK



ALZHEIMER'S

1.5-2* RISK



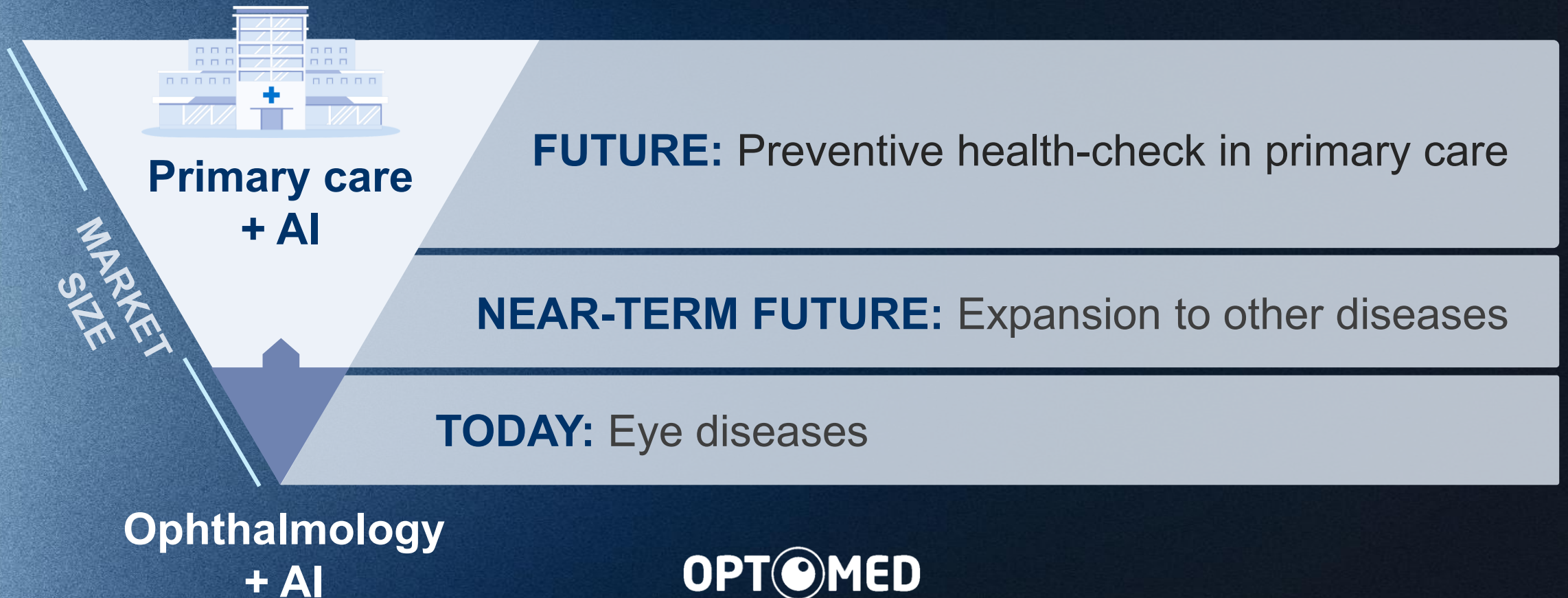
CKD

30-50%

OPTOMED

Oculomics

Optomed enables bringing screening from ophthalmology to primary care. Expanding from eye diseases to systemic health and disease risk assessment.



Screen. Detect. Done - in 1 Minute.



Retinal Imaging

Fast, 50-degree
image capture
—without dilation.



AI Analysis

Automated detection with
instant results on the camera
and in the Optomed Portal.



Results Integration

Report and image
integration with
hospital systems.



Enabling Screening for All

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