Clinical Trends Shaping the Market

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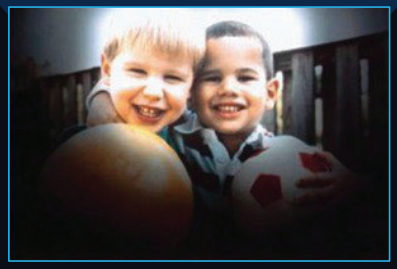
We need to improve the technologies available for eye care to manage the ever-growing disease burden

Glaucoma

80 M detected, growing to **111 M** in 2040



Diabetic retinopathy

540 M people today with diabetes

100 M with DR

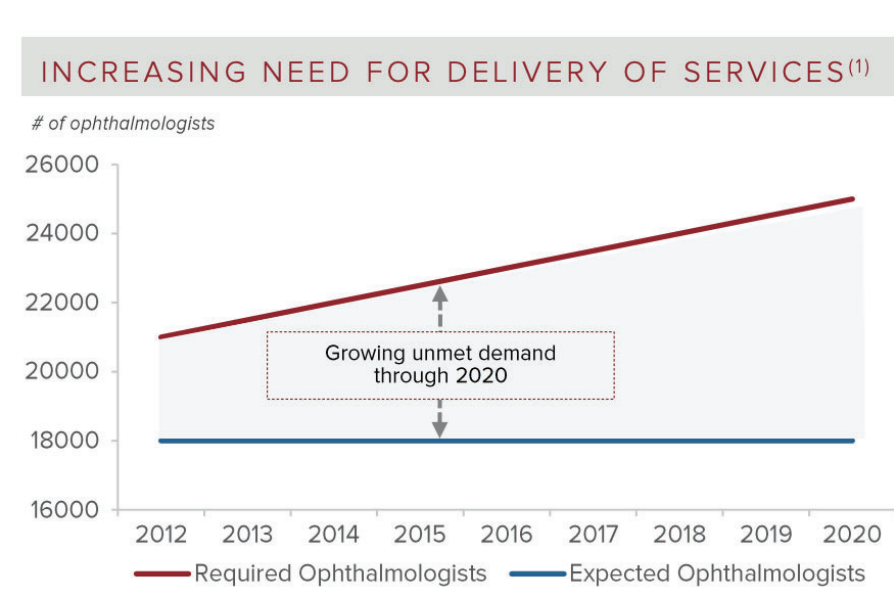
Age-related macular degeneration

196 M people in 2020, rising to **288 M** in 2040

Refractive error

30% of the global population has myopia (1 B people), growing to **50%** by 2050

Demand for eye care is growing and traditional models of care can't keep up



In the USA…
From 2020 to 2035, the number of ophthalmologists to decrease by 12%

Demand is projected to increase by 24%

Mismatch translates into a workforce inadequacy of 30%

41K optometrists, growing 2% per annum

Berkowitz ST, Finn AP, Parikh R, Kuriyan AE, Patel S. Ophthalmology Workforce Projections in the United States, 2020 to 2035. Ophthalmology. 2023 Sep 20:S0161-6420(23)00677-2.
https://www.harriswilliams.com/sites/default/files/industry_reports/hw_vision_industry_overview_0.pdf

DHHS Physician Supply and Demand Projections to 2020 and Jobson Optical Research (203, 2012, 2009)

We need to improve the technologies available to manage the disease burden

Glaucoma – leading cause of irreversible blindness globally

Diverse group of optic neuropathies.

80M people worldwide – **50%** undiagnosed in high-income countries, **90%** in low- and middle-income countries.

Glaucomatous vision loss is associated with increased morbidity, reduced quality of life and significantly increased health care costs.

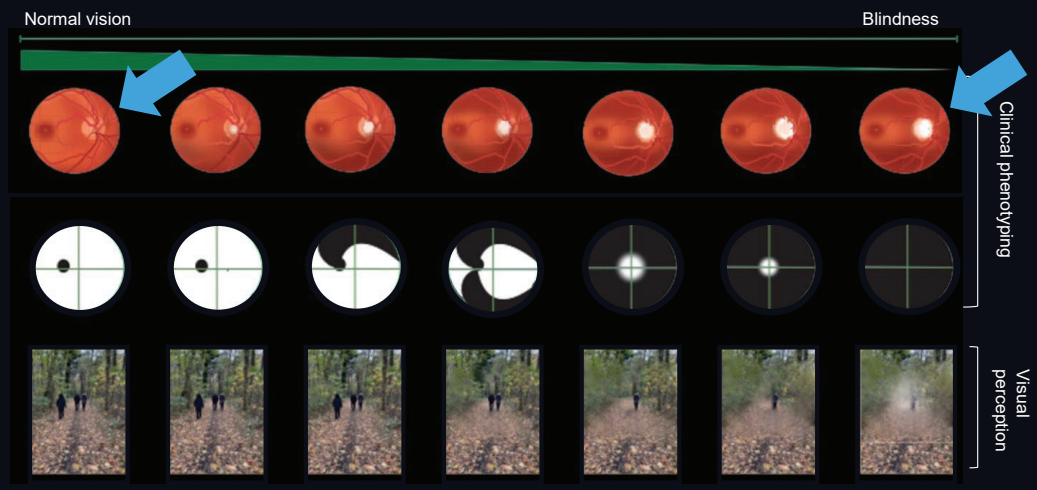
IOP the major modifiable risk factor, including spikes and fluctuations.

Treatments target lowering of IOP.

Source: McGlumphy EJ et al. Home Self-tonometry Trials Compared with Clinic Tonometry in Patients with Glaucoma, Ophthalmol Glaucoma Apr 2021; 9:S2589-4196(21)00090-9

We need to improve the technologies available to manage the disease burden

Glaucoma | Greater screening would prevent vision loss from glaucoma



Source: Jayaram H, Kolko M, et al. Glaucoma: now and beyond. Lancet 2023;402:1788-801

Vision loss occurs because of poor case detection and lack of treatment.

Screening is complicated as ½ of people with glaucoma have normal IOPs – therefore, you also need to see optic nerve.

AI with retinal imaging offers better opportunities for cost effective community-based screening.

Opportunities for predictive AI.

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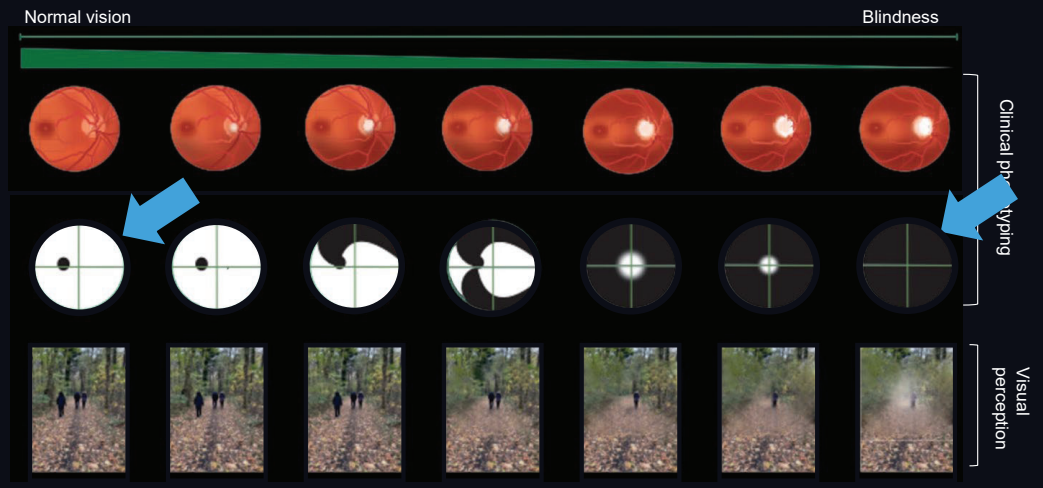

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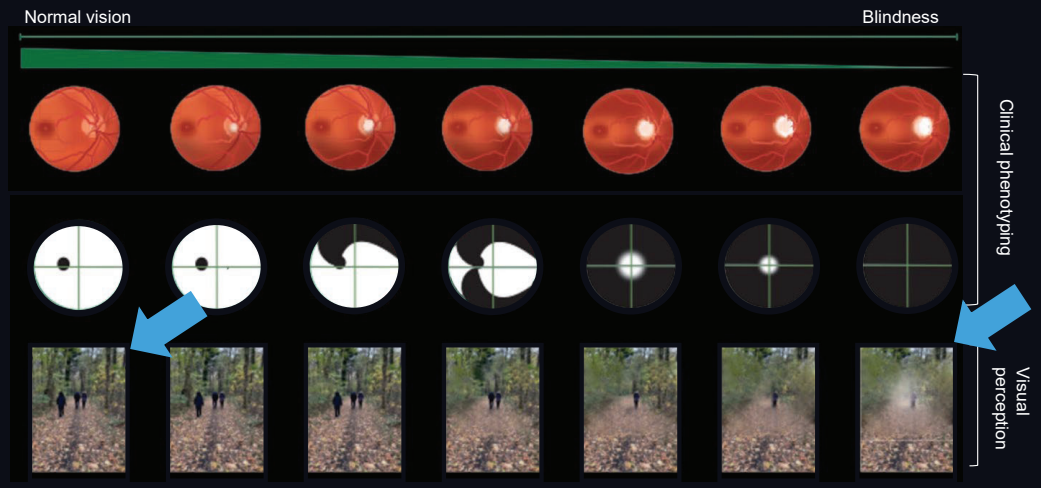

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Glaucoma | Glaucoma management: Key moments to understand IOP

Screening → Referral refinement → Risk stratification

iCare HOME2

- Assess progression
- Assess management change
- Acute post operative monitoring
- Surgical failure monitoring

Source: Kratz, Assaf MD; et al. Assessment of the iCare HOME2, a New Intraocular Pressure Self-Measurement Tonometer. Journal of Glaucoma 2023; 32(11):p 926-929

We need to improve the technologies available to manage the disease burden

Glaucoma | Key clinical trends drive segment growth

iCare IC100

iCare IC200

iCare HOME2

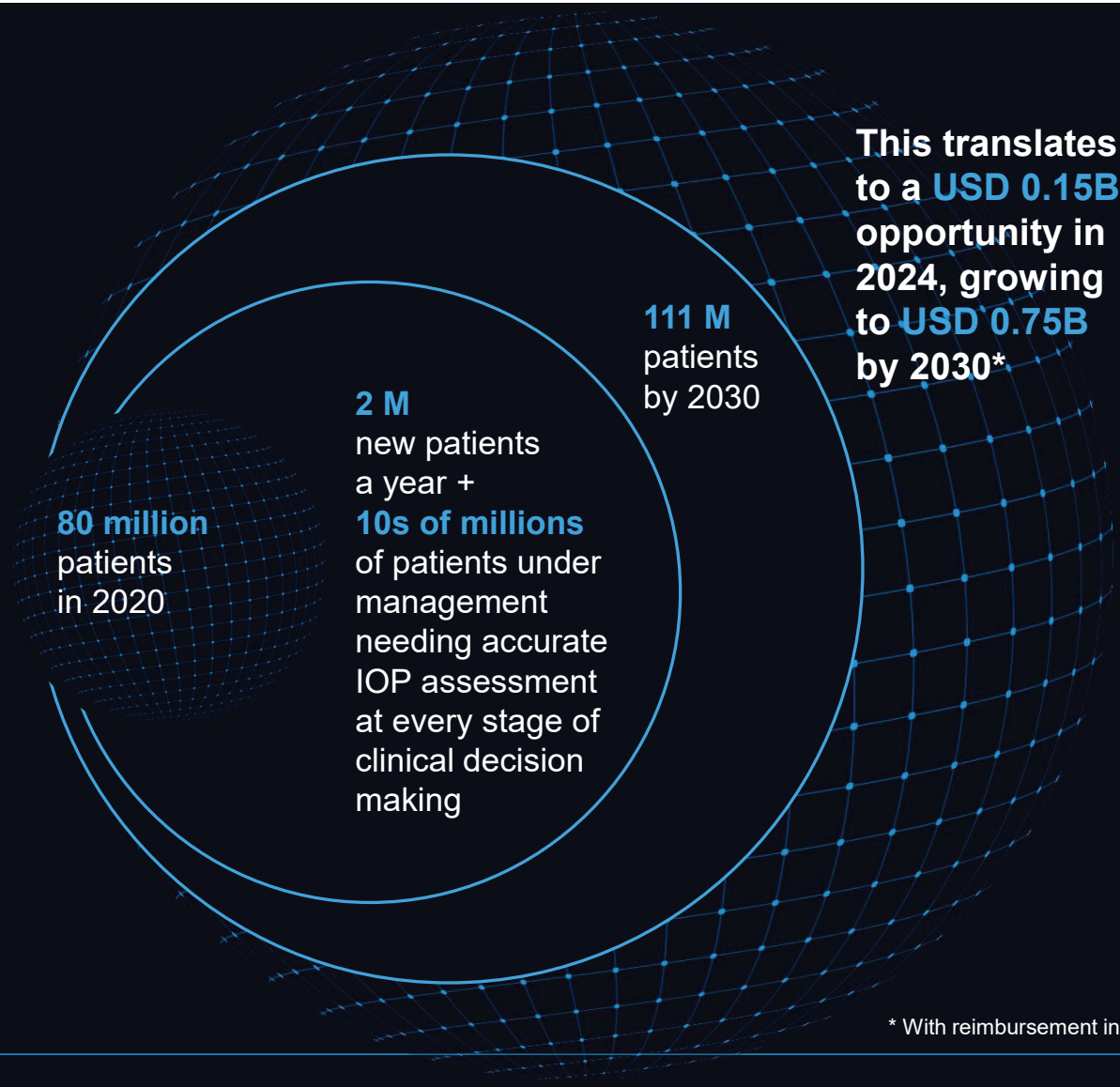
iCare DRSplus + ILLUME

iCare EIDON

iCare COMPASS

- Growing disease burden, increasing need for screening
- Earlier laser and surgical intervention, to reduce reliance on patient adherence
- Novel treatments – gene therapies, injectables/ implantables
- Clinical trials needing rigorous monitoring
- Digital visual field testing growing – including at home
- Reimbursement of home monitoring

Growing opportunity for glaucoma home monitoring device and services



This translates to a USD 0.15B opportunity in 2024, growing to USD 0.75B by 2030*

* With reimbursement in key markets

AMD

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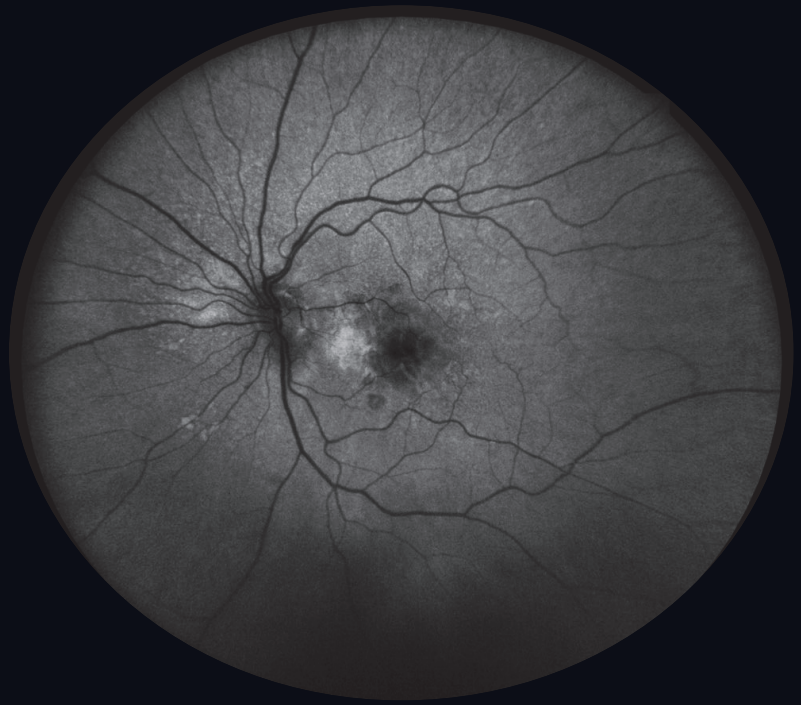
Age-related macular degeneration (AMD)



A leading cause of blindness in patients over 65, affecting 50% of people over 80

- **196M** people in 2020
- Growing to **288M** by 2040
- Increasingly in low- and middle-income settings

Loss of high acuity central vision limits reading, seeing of faces, driving, etc. Associated with reduced quality of life, independence and mobility, and greater risk of falls and depression.

Two forms of advanced disease

- Dry AMD (atrophy of the retinal pigment epithelium)
- Wet / neovascular AMD (exudative fluid)

Source: Guymer R, Campbell T. Age-related macular degeneration. Lancet 2023; 401:1459-72.

AMD

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Age-related macular degeneration |
New AMD treatment options change management needs

Geographic atrophy

- First 2 therapies approved in 2023
- Others under development

Wet AMD

- Current treatment is monthly injections
- Personalized treatment regimens with longer duration therapies coming to market

These increase the need for

- Home monitoring
- GA detection by optometry / general ophthalmology
- AMD progression
- Treatment personalization
- Better technologies to monitor trials and implementation of novel treatments

Source: Guymer R, Campbell T. Age-related macular degeneration. Lancet 2023; 401:1459-72.

D

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Diabetic eye disease

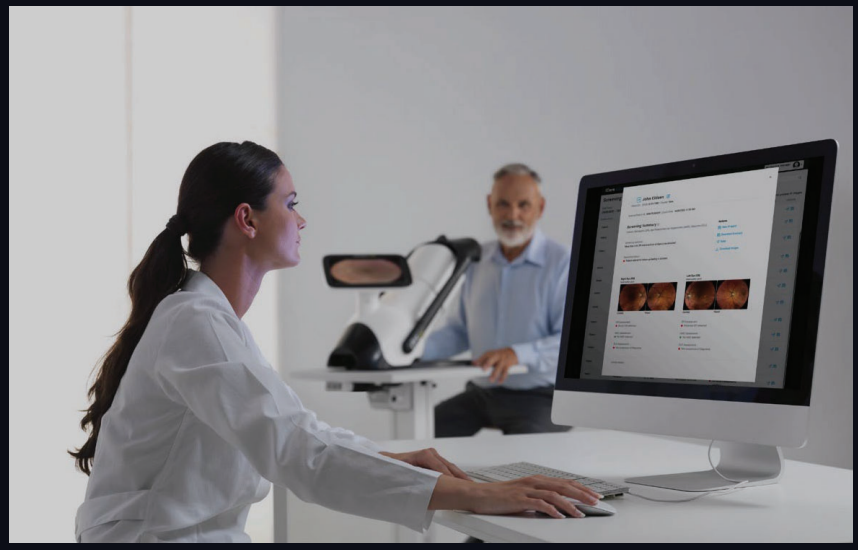
The leading cause of vision loss in 25–74-year-olds.

Diabetes growing rapidly in coming years (640M by 2030).

- DR occurs in **30–40%** of people with diabetes: **100M** people in 2020, bringing significant economic costs
- **95+%** of vision loss from diabetes can be avoided by timely screening and treatment
- **50%** of people with diabetes don't get their recommended eye examinations in high income settings
- It's worse in low- and middle-income settings, where **80%** of people with diabetes live

Telemedicine screening programs are proven to increase patient attendance and decrease the proportion of patients who develop vision-threatening DR.

Reimbursement for AI-based screening is gaining traction in some markets.



Source: Udaondo P, Parravano M, et al. Update on Current and Future Management for Diabetic Maculopathy. Ophthalmol Ther 2022;11:489–502. Tan TE, Wong TY. Diabetic Retinopathy: Looking forward to 2030. Front Endocrinol 2023;13;2022.

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D Diabetic eye disease | Growing opportunity for retinal screening

Diabetes is a huge and growing problem. Everyone with diabetes needs regular eye checks to prevent irreversible vision loss.

- **783M** by 2045 and about the same numbers of people are at risk of developing diabetes. They also need regular eye exams
- Moving screening into non-traditional eye care settings like emergency departments, primary care and retail increase the number of potential screening sites by 10–20+ times
- High imageability is critical for success[1]

The market for DR screening is **USD 0.7B** growing to **USD 1B** by 2030, including additional opportunities for imaging device sales

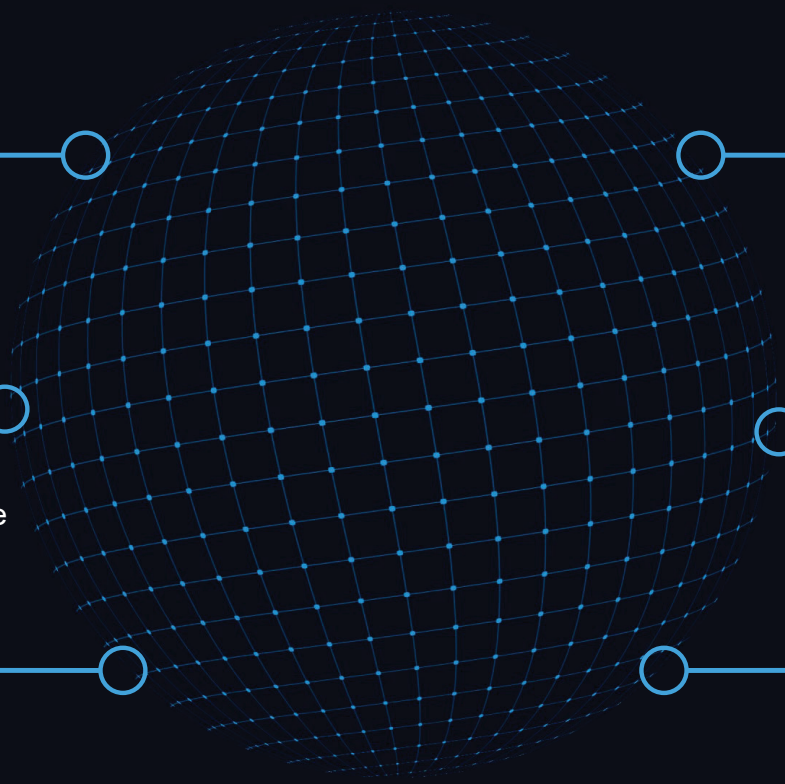
1. Paul S, Tayar A, et al. Use of artificial intelligence in screening for diabetic retinopathy at a tertiary diabetes center. Ophthalmologie. 2022;119(7):705-713.

Key takeaways

The growing burden of eye disease with static workforce increase needs for new diagnostics, connectivity and data-driven solutions

Key eye diseases are chronic and progressive, so for continuity of care it's critical to have the data available throughout the care pathway

New therapies increase need for microperimetry, AF imaging, predictive personalization and remote patient monitoring to manage glaucoma and retina care pathways



Stronger evidence base on IOP as independent risk factor for glaucoma increases importance of home IOP monitoring

Increasing acceptance of AI for screening and clinical decision support

Advances in clinical practice and technology are creating significant growth opportunities