

June 2023



Using AI to Scalably Screen for Retinal Diseases, Stroke, and Heart Disease

Early diagnosis and intervention can **prevent blindness, save countless lives & eliminate** massive amounts of **downstream spending**.



Problems

Vision Impairment and Blindness

iHS targets the leading causes of blindness: Age related Macular Degeneration (AMD), Diabetic Retinopathy (DR), Hypertensive Retinopathy (HR) & Glaucoma.

Early detection is essential, but...

These diseases typically have no symptoms – it's often too late to reverse them by the time patients visit Ophthalmologist. Early detection & preventive care are essential: there's no treatment after progression.

... over 50% of at-risk population NOT screened

Conventional (manual) screening depends on PCP referral to specialists; many patients don't comply at all and everyone faces delay due to ophthalmologist access issues. The majority of the at-risk population is not being served until it is too late.

Heart Disease and Stroke: Inadequate screening

Two of the Top 5 causes of death are not well screened for today. Over 40% of at-risk population is NOT currently being screened.

Healthy vision



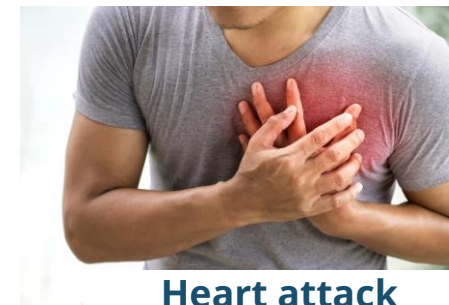
AMD patient vision



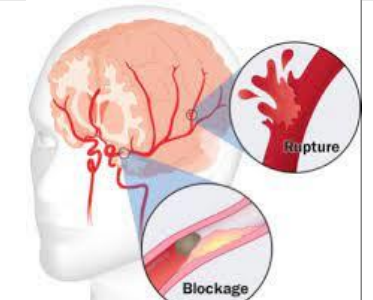
DR patient vision



Glaucoma patient vision



Heart attack



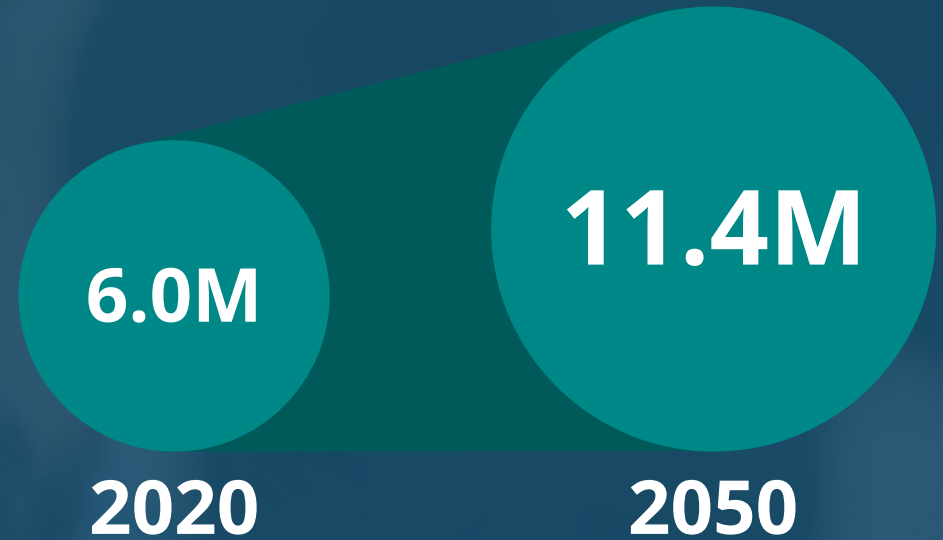
Stroke

Eye Conditions are Expected to Grow

Macular Degeneration Cases



Diabetic Retinopathy Cases



Opportunity:

Develop and deploy retinal-imaging-based diagnostic platform for use in primary care

"The Eyes are the Window to... Your Health"



Highly Accessible

iHS' approach makes screening for multiple diseases accessible in primary care settings.



Super efficient

Specialist appointment takes weeks or months; iHS removes the bottlenecks, meeting patients where they are.



Reimbursable

A dedicated CPT code (92229) in USA; can be used by PCP practices.
Thiqa and Daman (Abu Dhabi Approved)



Large, Growing Need

80M people will be diabetic and 108M will be over 50 by 2030 in US alone.
6M in UAE; >10M in Australia

Low cost, small footprint, no specialty training required

iHS offers screening in same PCP visit; entire process <5 minutes

Automated AI-analyzed screening is now financially viable

188M+ candidates (in USA) screening for DR and AMD alone

Current Approach: PCP visit → Specialist referral → Specialist screening → Vision-saving preventive care
35% of all patients do NOT go to specialist appointment; 50% in underserved markets

The Product **iPredict**

Initial Focus: AMD & DR Screening

Click to see how it works:
[iPredict3 3 - YouTube](#)



Captures images & medical parameters

(min. training req. – less than an hour)
(Both eyes captured – less than 2 min.)



Uploads data via telemedicine application

(less than 1 or 2 min.)



Fully automated AI program

- screens DR, AMD and Glaucoma
 - predicts AMD, CHD, stroke, and other diseases
- (less than 1 min.!)



Optimized clinical workflow

- produces actionable report
 - creates referral to Ophthalmologist or cardiologist/neurologist if needed
- (less than 1 min)

Benefits

Accurate

>95%

Accurate in screening DR and AMD – comparable to or better than an expert

Fast

<5min

For the entire procedure (imaging, analysis, & report)

Convenient

**Specialists
not needed**

Automatic image evaluation (system refers to ophthalmologist if warranted)

Effective

**Early
Detection**

Technology ready for large-scale screening (enables a shift to primary care)

Economical

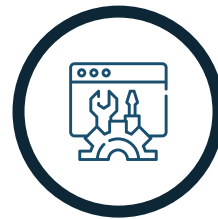


Adds easy revenue for Clinics (and decreases downstream healthcare cost)



Manual Analysis

Need specialist visit; takes days for the report; many patients drop out



iPredict

Screening same day as PCP visit
Automatic report within 5 minutes



Over 98% of DR and AMD cases, and nearly **100%** of normal cases are correctly identified by iPredict.

Metric	DR	AMD
Sensitivity	0.976	0.989
Specificity	0.994	0.995
AUC	0.99	0.99

Performance details

Tools	iHealthscreen	95% CI for Accuracy
AMD Screening	Overall accuracy 96.1% (AUC 0.99)	95.5% – 96.7%
AMD Prediction (2-year)	Overall accuracy 89.61%	86.8% to 92.0%
DR Screening	Overall accuracy 97.9% sensitivity - 99.21%, specificity - 97.59% (AUC 0.99)	97.6% to 98.2%
Glaucoma Screening	Overall accuracy 94.14% (AUC 0.95)	92.0% to 95.8%
Cardiovascular Disease Prediction (5-year)	Overall accuracy 75.8% (AUC 0.78)	72.1% to 78.8%
Stroke Prediction (5-year)	Overall accuracy 82.4%	76.2% to 89.2%
Heart Attack Prediction	Overall accuracy 83.14%	76.4% to 90.3%

IP/Regulatory Status

Product Name	IP Status	FDA Status
DR/glaucoma Screening	Provisional patent (submitted)	Pre-meeting completed (DR)
AMD Screening	US Patent Awarded	Pre-meeting - completed
AMD Prediction	US Patent Awarded	Pre-meeting
Stroke/heart disease Prediction	Provisional (submitted)	Pre-meeting
Retinal Blood Vessel Analysis Software	PCT (PCT/US17/41712)	N/A
EHR /w Telemedicine	Copyright	HIPAA Compliant

Competition

Capabilities

- AMD Screening
- AMD Prediction
- DR Screening
- Glaucoma Screening
- Retinal Blood Vessel Analysis Software
- OCT Analyzer
- Retinal Disease Progression Analysis
- Stroke Prediction
- Heart Disease Prediction
- EMR with Telemedicine



✓		✓	
✓			
✓	✓	✓	✓
✓		✓	
✓	✓		
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iHS has the strongest value proposition in the screening market:

- Higher Accuracy
- First AMD screening and prediction model
- Largest number of high-impact primary care indications (AMD, DR, and glaucoma, incl. stroke & MI)
- More economical and better camera with higher imageability rate

1. iDX pipeline: <https://www.eyediagnosis.net/pipeline>

2. Eyenuk Disease Conditions: <https://www.eyenuk.com/en/ai-eye-screening/>

3. i-Rx VisionQuest Technology <http://visionquest-irx.com/index.php/technology/advanced-retinal-diagnostics/>

iHealthScreen's Accomplishments

Developed and Validated

- HIPAA compliant telemedicine tool **iPredict™**
(AMD prediction trial approved by Mount Sinai IRB and started in four clinics)

- **DR, AMD and glaucoma screening tool**
(Simultaneous screening for up to 3 eye diseases; trial ongoing)

- State-of-the-art **Stroke Prediction System**
(It outperforms popular methods in preliminary studies)

- **Cardiovascular disease Prediction System**
(Predicts multiple types of heart-related diseases; outperforms popular methods in preliminary studies)



First prediction model for Late AMD; featured work at ARVO 2018/Macular News; Featured at American Academy of Ophthalmology 2020



and TGA/Australian and Abu Dhabi Health approved

*to market in EU and other countries, seeking partners; **have signed licensing agreement with a large hospital and a camera company***



HUB71 & START-UP New York Program (10 years tax-free)



Won NIH SBIR Phase I and II grants; **~\$2.7M**; Customer segment determination/validation through rigorous **NIH I-Corps** process (national program)



One US Patent was Awarded, and **3 provisional** patent applications submitted

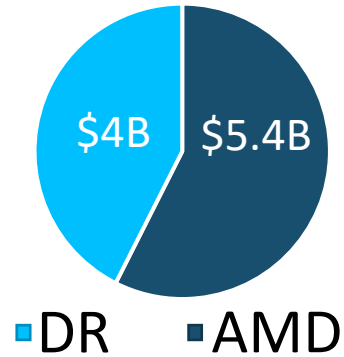


Two FDA pre-submission meetings - the **AMD 510K application submitted**; **DR 510K is in the final stage of submission**



First in EU, Australia and the Golf region (DoH, Abu Dhabi; others to follow) - Thiqa and Daman (insurance) approved

\$9.4B



\$50K/yr. per practice

188M patients x \$50 (DR and AMD screening combined)

40% of the total revenue (\$50 x 5 x 50 x 10)

DR Screening (diabetics) – 80M
AMD Screening (Age >50) – 108M

209,000 Primary Care Physicians

\$50 – per patient;
5 – days of the week
50 – weeks of the year
10 – estimated patients/day

\$7.35B

147M patients x \$50 (stroke and heart disease screening)

(117M patients x \$50) Americans 50+ years
(30M patients x \$50) Americans aged 35-50 with
obesity or hypertension or
current smokers

209,000

Primary Care Physicians

\$50K/yr. per practice

40% of total revenue (\$50 x 5 x 50 x 10)

\$50 – per patient;
5 – days of the week
50 – weeks of the year
10 – estimated patients/day

Now Ready to Enter: Eye Disease

UAE Market: Australian Market

\$300M

(6M patients x \$50)



Reimbursement
available

\$1.8B

Middle East

Combined for DR, AMD and Glaucoma screening
Stroke and Heart Disease will make it **\$600M**

DR Screening (diabetics) – 2M
AMD Screening (Age >50) – 2M or above
Glaucoma Screening 2M or above

***Projected market size –**
GULF COUNTRIES: \$1.8B (3x UAE) – 5 diseases

\$960M

Australian Market; eye diseases only

\$1.9B

+ CHD and stroke

DR Screening (diabetics) – 1.2M
AMD Screening (Age >50) – 8M or above
Glaucoma Screening (Age 40+): 10M

Projected Revenue

Markets	Years					
	2023	2024	2025*	2026	2027	
USA	\$1.8M	\$9.3M	\$29.15M	\$67.2M	\$110.6M	
Australia	\$150K	\$1.5M	\$15M	\$30M	\$40M	
EU	\$0K	\$50K	\$1.5M	\$10M	\$25M	
UAE	\$500K	\$1.5M	\$5M	\$10M	\$20M	
Total Revenue	\$2.5M	\$12.3	\$50.6M	\$117.2M	\$195.6M	
Expense	\$6.9M	\$12.6M	\$29.9M	\$56.6M	\$86.3M	
EBITA	-\$4.3M	-\$290K	\$20.7M	\$60.5M	\$109.3M	

*Glaucoma FDA clearance Australia/EU - \$15/screening USA/UAE: \$20/screening

Comparable

Company	Pre-FDA 510k Raise	Post-FDA 510k Raise
iDX (Only DR Screening)	\$22.1M (4 angels' round)	\$33M (Series A) \$75M (Series B)
iHealthScreen (AMD and DR)	\$5M	\$50-\$80M
Timeline 24 months		

Metric	iHealthScreen	iDX-DR
Sensitivity	97.6%	96.8%
Specificity	99.4%	87.0%
AUC	0.99	0.98

Potential Exit

Company	Pre-FDA 510k	Post-FDA 510k Valuation
Based on AMD and DR	Valuation \$25M	\$250M
	10x in 24 months	
	Timeline 24 months	

Management Team USA



Alauddin Bhuiyan, PhD
President and CEO

15+ years experience
and a leader In this area

Harvard Scholar

Prestigious Endeavor
Australia Fellow

Have 2 US Patents, many
applications and led
commercially available
software product



Lori Lonczak, RPh, MBA
Commercial Lead

Sales and marketing executive
with experience leading brands
ranging from start-up to \$3B in
annual revenue



Thomas Gerson
Chief Financial Officer

the proven ability to identify and
align an emerging growth
companies and maximizing
potential value creation and
financial returns

20+ years of Lead Finance roles
with multiple bioscience companies



Kate Adams, MBA
Chief Marketing Officer

Experienced Marketing
executive in the life
science industry

Former Director of Marketing
Quest Diagnostic, US

Former VP, Marketing at
HistoRx



15+ years experience
and a leader In this area



Experienced in
product branding
In healthcare



Experienced Marketing
executive in the life science
industry

Scientific Advisory Board



Prof. Theodore Smith
Ophthalmology, Mount Sinai,
30+ years Exp.



Prof. Tien Wong
Ophthalmology, DUKE-NUS,
20+ years exp.



Prof. Nasir Memon
Director, Cybersecurity, NYU,
30+ years exp.



Travis Millman, MAPP
Strategic Advisor

Serial entrepreneur, digital health and medical device professional

Former VP, Pearson Clinical Assessment. Consulted to Philips Healthcare and Samsung NEXT digital health portfolio.

Legal and Regulatory Team



Lina Kontos
FDA consultant
Hogan Lovells



Steve Kenny
Patent Attorney
Foley Hoag LLP



Beth Roberts
Reimbursement Consultant
Hogan Lovells



Gary Schall
Company Lawyer
Partner, WilmerHale

Funding Strategy, Timing, and Next Steps



Pre/Series A (\$5M) Use of funds

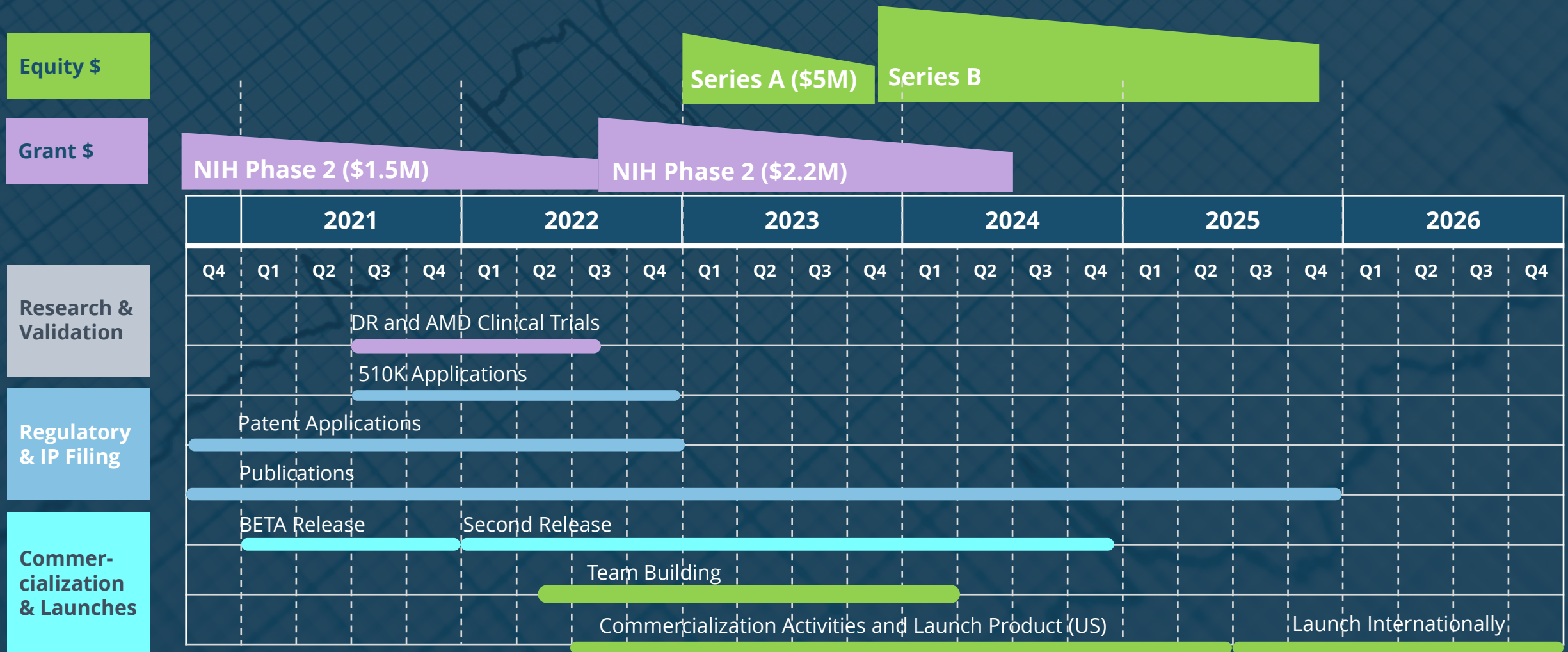
\$5M for Q1'23-Q4'23

Will use the proceeds to:

- EU/UAE/Australia Market Entry – Team Build
- Conclusion of clinical studies for FDA. USA, and
- Completion of FDA 510k clearance cycle for first product (DR and AMD screening)
- Fund marketing, sales, and support activities, and
- Continue R&D on additional indications (AMD, glaucoma & stroke prediction)
- Start the clinical trials for Stroke and Heart Attack Prediction
- Ready for Series A

With FDA clearance, product evaluation by multiple prospective customers, and reimbursement validated across multiple payors, risk will have been substantially mitigated.

Leveraged Equity and Grant Funding Plan



Thank You!

We would love for you to join us in our quest to save vision, lives and healthcare costs

Alauddin Bhuiyan, Ph.D.

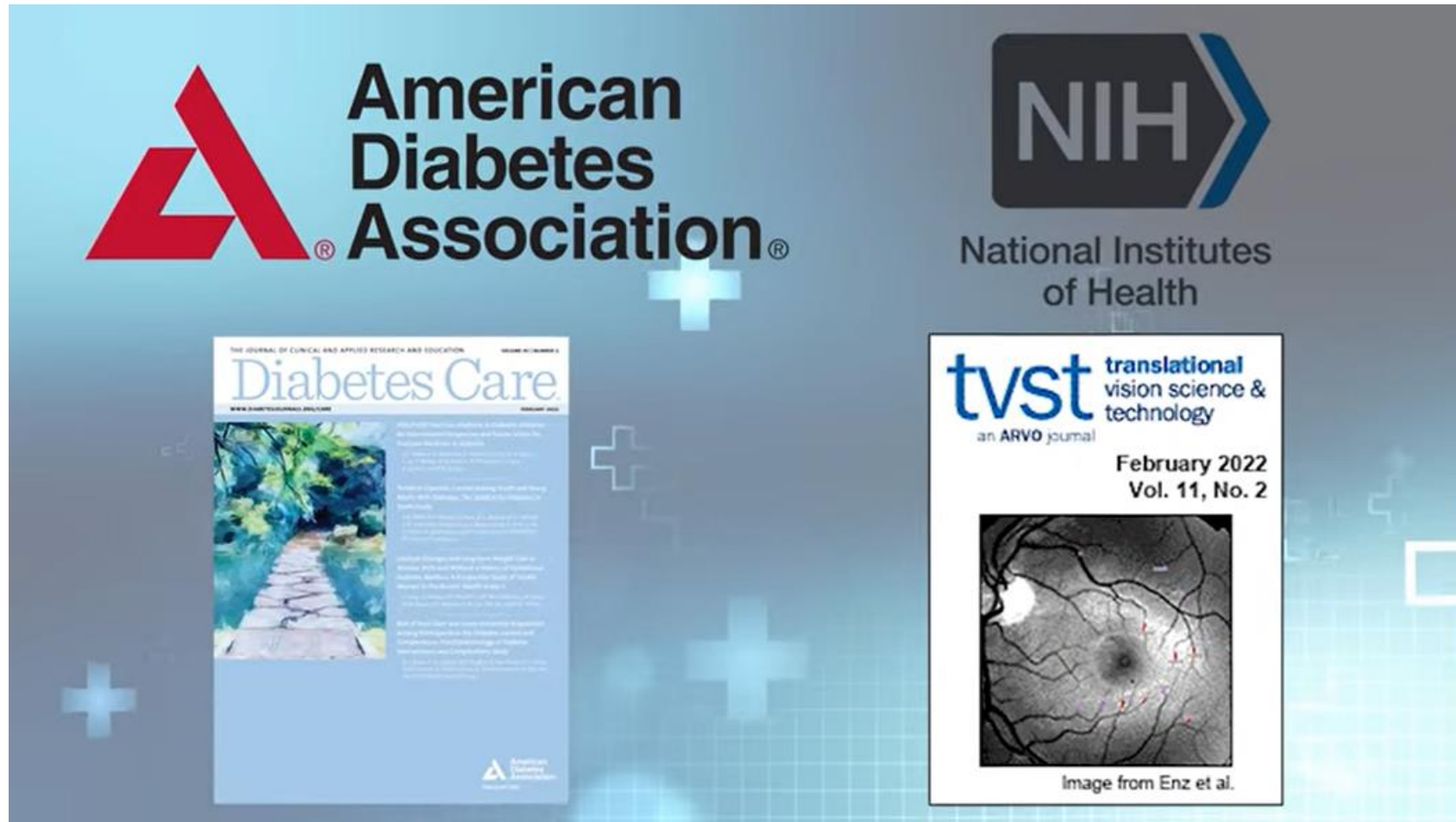
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Results are Published in the Top Scientific Journals



Team USA R&D



Dr. Alauddin Bhuiyan
Chief Scientist



Ms. Ciara Serpa
Research Associate



Msr. Aysha Choudhury
Office Assistant



Mr. Arun Govindaiah
Senior Research Engineer



Ms. Fariah Nuha
Research Associate

Team UAE



Alauddin Bhuiyan, PhD
CEO

15+ years experience
and a leader in this area

Harvard Scholar

Prestigious Endeavor
Australia Fellow



Ms. Leyla Azizova
Advisor, Business
Development

Senior Director, Dawn Health.

Trusted advisor in shaping the
agenda of governments and
private sector players.



Mr. Jassim Al Rahma
Advisor, Business Development,
and Investors Relations

General Manager, Emirates Angels.

18+ years leading the implementation,
development, and design for business
and development

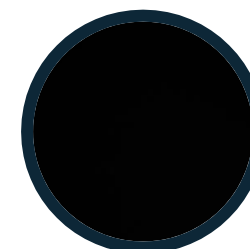


Mr. Ahmed Elarabi
Snr. Business Dev Exec.

8+ years of experience in
healthcare



Ms. Noor Abushaiwsh
Business Dev Executive



Mr./Ms. XX (hiring)
Regional Sales Leader

Team Bangladesh: Developers



Ms. Ferdousi Akhter
Manager



Md. Jakir Hossain
Sr. Software Engineer



Noni Gopal Sutradhar
Rinku
Team Lead



Md. Mizanur Rahman
Senior Software Engineer



Mahbubul Alam
Full-stack Engineer



Md Sarwar Hoshen
Software Engineer



Abdullah Al Muhid
Software Engineer



Md. Sabbir Sattar Mukit
Junior Software Engineer



Tanvir Ahmed Khan
Engineer / Tester



Md. Tamim Tanvir
Ui/UX Designer



Ariful Hasan Kawshiq
Business Development Executive



Nasir Uddin Sarker
Assistant manager



Aticul Islam
Digital Marketing Specialist

iHealthScreen's Goals & Spending Alignment



Clinical Milestone – Initiate and Complete Clinical Trials for AMD and DR Screening

- **Forecasted Expense through 2023 ~\$1M**
 - Marketing in UAE/Australia/EU
 - Complete Prospective Trial; FDA 510k Submission
 - Secured needed regulatory consultants



G&A Milestone – Building Corporate Infrastructure

- **Forecasted G&A Expense through 2023 ~\$0.5M**
 - Complete necessary patent work to protect intellectual property
 - Build financial risk management and controls
 - Establish vendor relationships for cameras



Commercial Milestone – Prepare for Revenue Launch USA and globally

- **Forecasted Selling Expense through 2023-24 ~\$4.5M**
 - Create branding and marketing materials prior to launch
 - Hire Commercial leadership and initial sales team to be ready Day 1
- **FDA approvals/clearance of AMD prediction and glaucoma screening**

Reimbursement Status

Product/Service	Reimbursement Code	Description
DR Screening	CPT 92229 (~\$50 both eyes)	Reimburse yearly screening for diabetic patient
AMD Screening	CPT 92229 (in case of pathology); New or same CPT code	Reimburse patient with AMD pathology; will obtain CPT code
Glaucoma screening	" "	—
AMD Prediction	" "	—
Stroke/heart disease Prediction	" "	—
Telemedicine	99203 (new patient) and 99213 (old patient); (\$73 per patient)	Reimburse 15 minutes telemedicine-based consultation

Reimbursement codes are already available (amount varies with states) and being used for DR and AMD Screening along with telemedicine services, so we can generate revenue immediately after FDA approval.

Go To Market Strategies

Drive Product Benefit Messaging to Target-Health Professionals, Large Primary Care Clinics and Concierge/Telemedicine Companies

- Target PCPs, Geriatricians, Endocrinologists, and Concierge Medicine/Telemedicine Companies
- Utilize "hunter"/"cultivator"/strategic access selling model
- Drive customized differentiating launch messages to sell clinical/administrative stakeholders
- Sell/present data at target conferences
- Advertise in medical journals and via digital media
- Develop and execute public relations plan

Ensure Market Awareness, Access and Reimbursement

- Ensure ophthalmologists are aware and supportive
- Assess the value of new clinical and health economic studies
- Notify and/or sell to top-IDNs including Kaiser, VA-DOD, 5 large national health plans, large private primary care groups/clinics

Assess New Clinical Stakeholders (e.g., optometrists)

Sales Force Will Ramp Up Over Time, Starting with 8 Reps in the NY/Metro Area

2023 (1st Quarter)

8 sales reps (hunter/cultivator combo role)
1 VP, Sales
1 Strategic Access Manager

2023

24 reps (8 hunters, 16 cultivators)
1 VP, Sales
3 District Managers
3 Strategic Access Managers

2024

40 reps (13 hunters, 27 cultivators)
1 VP, Sales
5 District Managers
5 Strategic Access Managers

Partners and Alliances



These partnerships will allow us to **collaborate** for clinical trials, to **expand** nationally and internationally, and also to **publish** at high-impact factor journals

Media Coverage



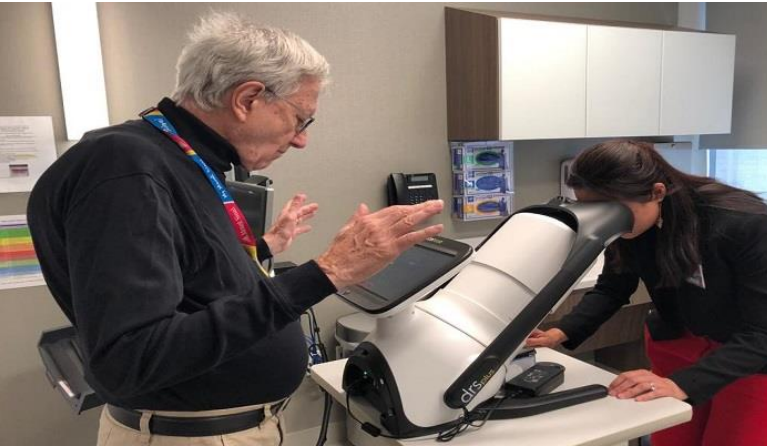
AI based Screening in USA



Collaboration with Mount Sinai Hospital, NY, USA



Trial site at Hill Side Clinic, Queens, NY



Prof. Theodore Smith, Ophthalmologist & Chief Scientific advisor, demonstrate AI based Screening



Trial Site: Union Sq. Clinic, Mount Sinai, USA

Eye Screening in Abu Dhabi Mall on World Sight Day (Social Awareness Program: October 13-14, 2022)

On Going
Eye Campaign



Screened -
A DR Patient
(diagnosed)



Team picture: supporters - Abu Dhabi Mall and Emirates Angels,
the optometrist, member iHealthScreen

DR Screening in Bangladesh



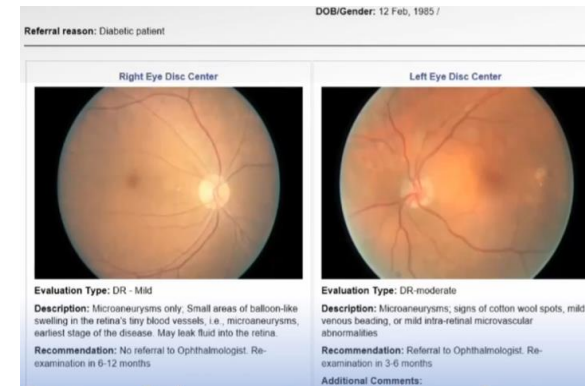
Contract Handover between BADAS & iHealthScreen for 5.5M registered Diabetic Patients eye screening countrywide.



Mobile Lab Services for countrywide BADAS Diabetic centres



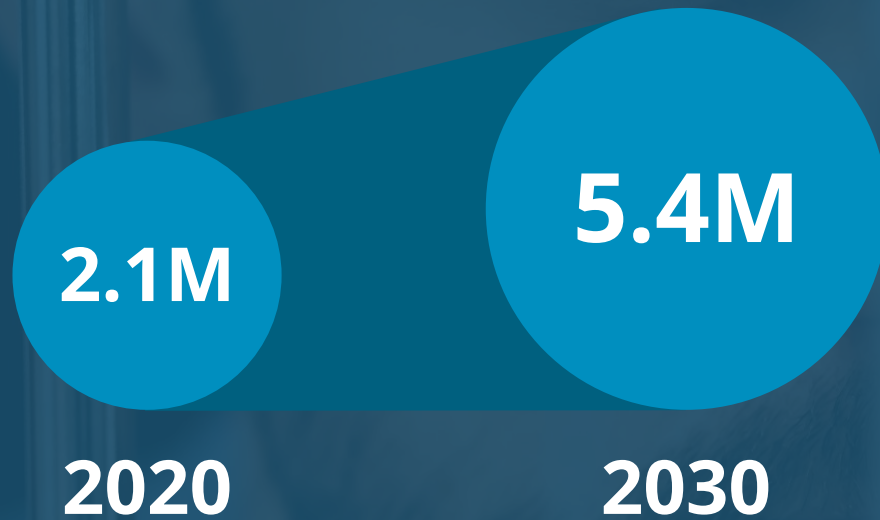
DR Screening Booth in BiHS General Hospital, Mirpur, Dhaka



Research Survey with BADAS, Funded by Bangladesh Govt. (DG Health)

Eye Conditions are Expected to Grow

Macular Degeneration Cases



Diabetic Retinopathy Cases



High costs of treatment

Macular Degeneration

\$10B

Direct cost of treatment



Diabetic Retinopathy

>\$5B

Direct cost of treatment