



Become A Social Innovator

Product Development Meeting
Santen Pharmaceutical Co., Ltd.
October 7, 2021

Presentation / Q&A



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Chief Executive Officer



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Q&A



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Agenda

- 1. Santen's Product Development**
- 2. Enrich Pipeline based on Patient's Needs**
- 3. Pursue Added Value by Steadily Promoting Product Development**
- 4. Improve Portfolio Value through Industrialization and Commercialization**
- 5. Summary**

Appendix

Forward-looking Statements

- Materials and information provided in this announcement include so-called "forward-looking statements". The earnings forecasts and other forward-looking statements herein are based on information currently available to the Company and certain assumptions that we believe to be reasonable. The realization of these forecasts is subject to various risks and uncertainties. Please be aware that actual results could differ materially from these forward-looking statements. We assume no obligation to update the contents of this document from time to time.
- Risk factors include, but are not limited to, the following:
External factors such as trends in pharmaceutical administration, social and economic conditions, changes in laws and regulations, and exchange rates. Changes in the competitive environment, such as the impact of generics. Reliance on certain products and business partners, such as dependence on mainstay products, reliance on licensed products, and reliance on certain business partners for the supply of bulk drugs. Uncertainty in the development of new drugs, the possibility that R&D investment will not produce sufficient results, the success or failure of alliances with other companies, and other R&D activities. Other factors include intellectual property rights, production slowdowns and delays caused by natural disasters, product supply issues such as discontinuations and product recalls, litigation, and risks related to global business development.
- This document contains information about pharmaceutical products (including products under development), but is not intended for advertising or medical advice.
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Shigeo Taniuchi
President &
Chief Executive Officer

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CORE PRINCIPLE and WORLD VISION

CORE PRINCIPLE

天機に参与する

Tenki ni sanyo suru

“Exploring the secrets and mechanisms of nature in order to contribute to people’s health” *

WORLD VISION

Happiness with Vision

The Happiest Life for every individual, through the Best Vision Experience

* Santen’s original interpretation of a passage from the Zhongyong (The Doctrine of the Mean) by Confucius.

Maximize the Value of Core Businesses. Leverage to Enter New Businesses and New Areas

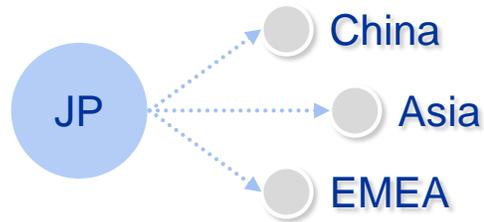
Santen 2030 (2021-2030)
Become a Social Innovator

Vision 2020 (2011-2020)
Expanded global market presence

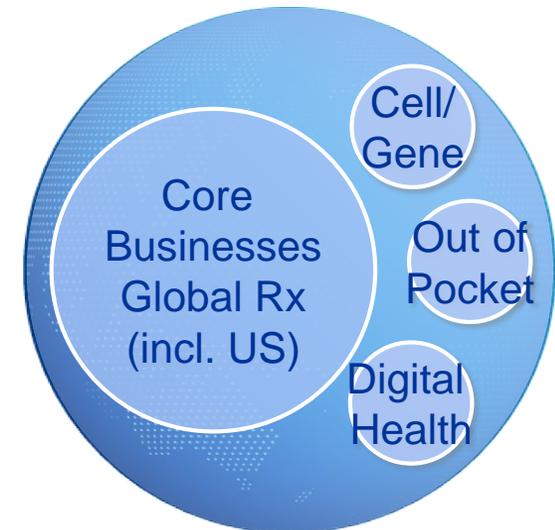
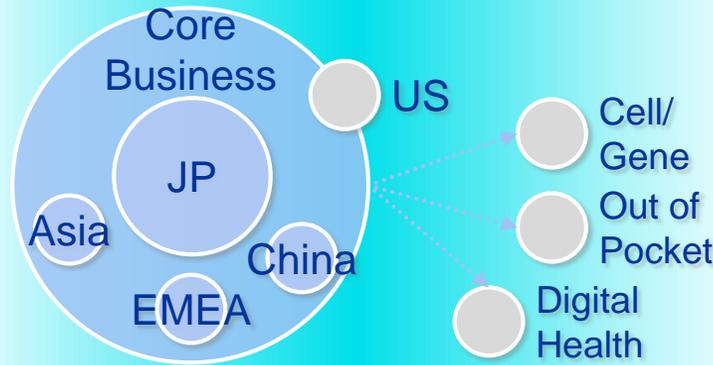
MTP2025 (2021-2025)
Transformation into a truly global ophthalmology Rx company



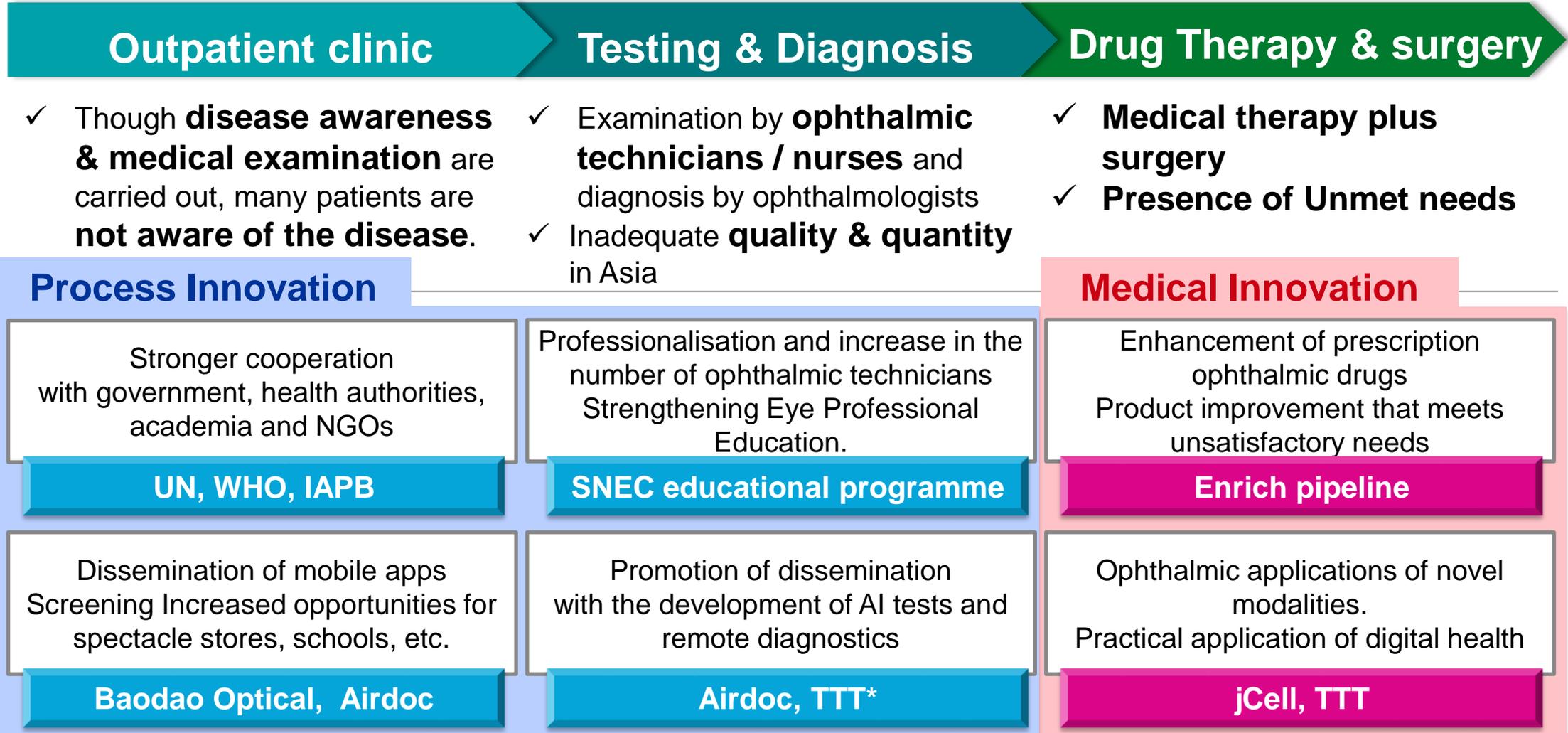
Santen as of 2011



Santen as of 2021



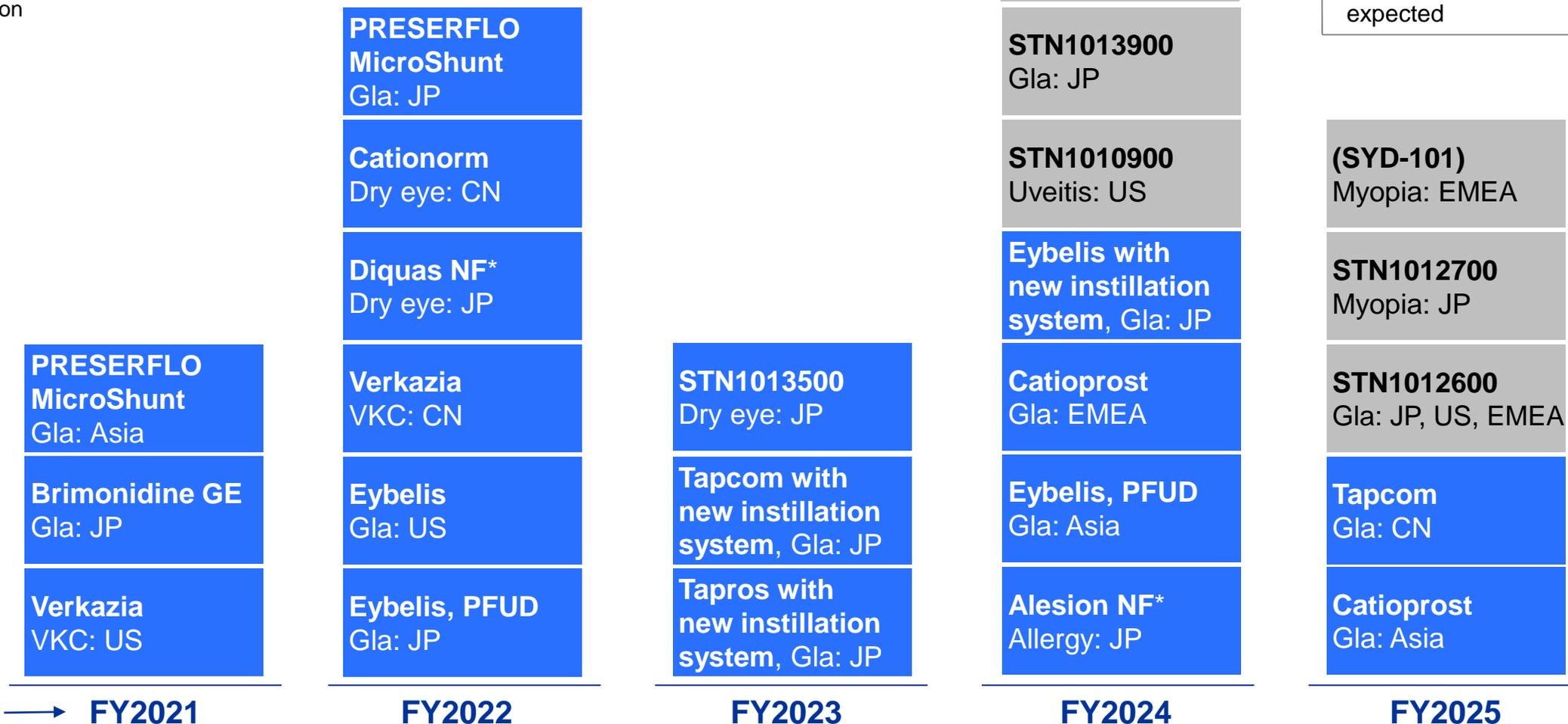
To Achieve Happiness with Vision, We are Developing a Wide Range of Ophthalmic Solutions



Rich Pipeline to Support Mid-/Long-term Growth

■ Potential new global product
■ Value expansion of product based on real market needs

*NF: new formulation

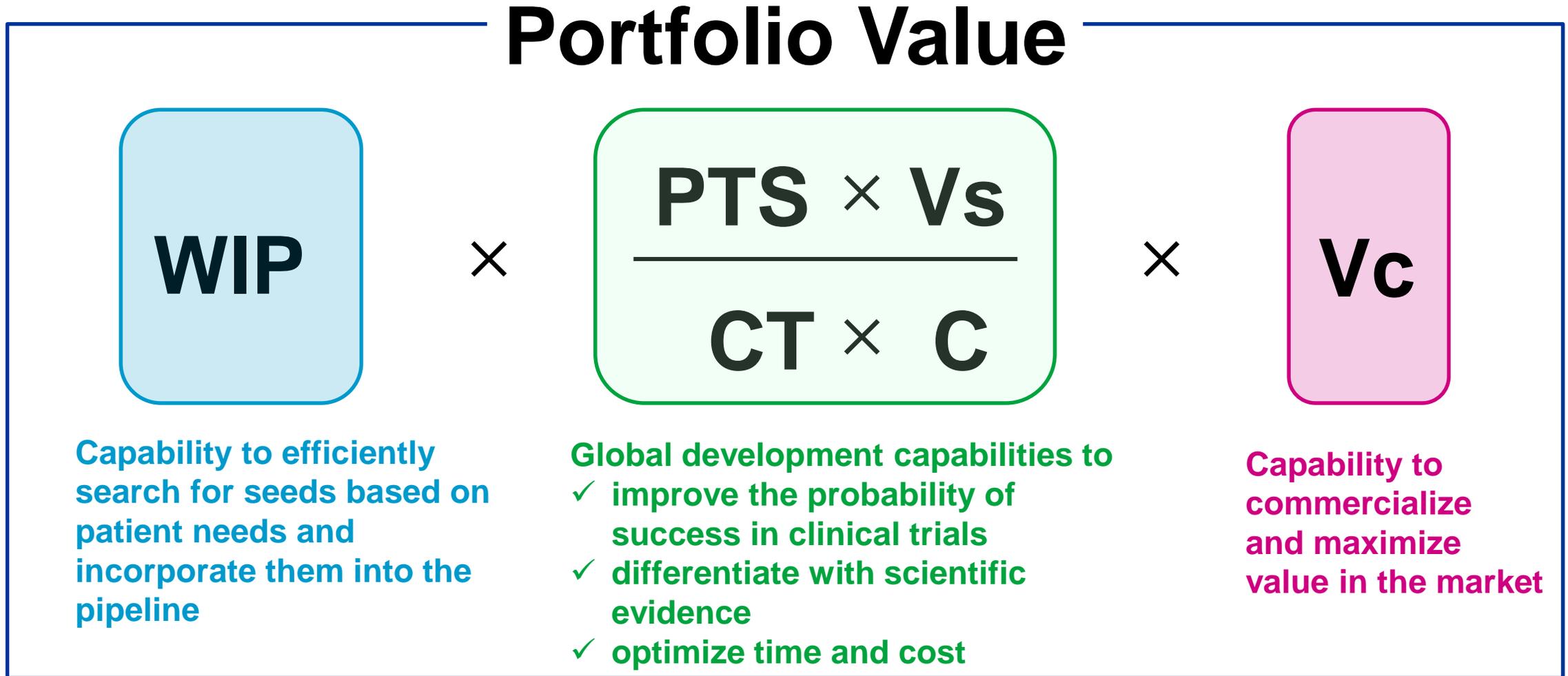


Implement Strategic Product Development Based on Productivity

$$\text{R\&D productivity} \propto \frac{\text{WIP} \times \text{PTS} \times \text{V}}{\text{CT} \times \text{C}}$$

WIP (work in process) PTS (probability of technical success)
V (value) CT (cycle time) C (cost)

Enhance the Portfolio Value by Refining Three Capabilities





Reza Haque, MD, Ph.D.
Head of Ophthalmology
Innovation Center

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To Respond to Potential Needs, Seek for New Technologies and Product Candidates Beyond the Industries



1) People



2) Disease Strategy



3) Network

1) People

We Collect >1,000 Patients' Voices Globally in a Year



Company-wide
People Centric Activity



2,000+
Direct Patient
Insights



Patient Journey

Innovation

2) Disease Strategy

Identify Disease to be Tackled from Disease Needs and Levels of Technology and Build Disease Strategy

**Core
business**

Dry eye

**Glaucoma
(IOP lowering)
Allergy**

Value Maximization

**New
frontier**

**Glaucoma
(MIGS)
AMD**

Differentiation

**Myopia
Presbyopia
RP*
Ptosis**

Frontier



2) Disease Strategy

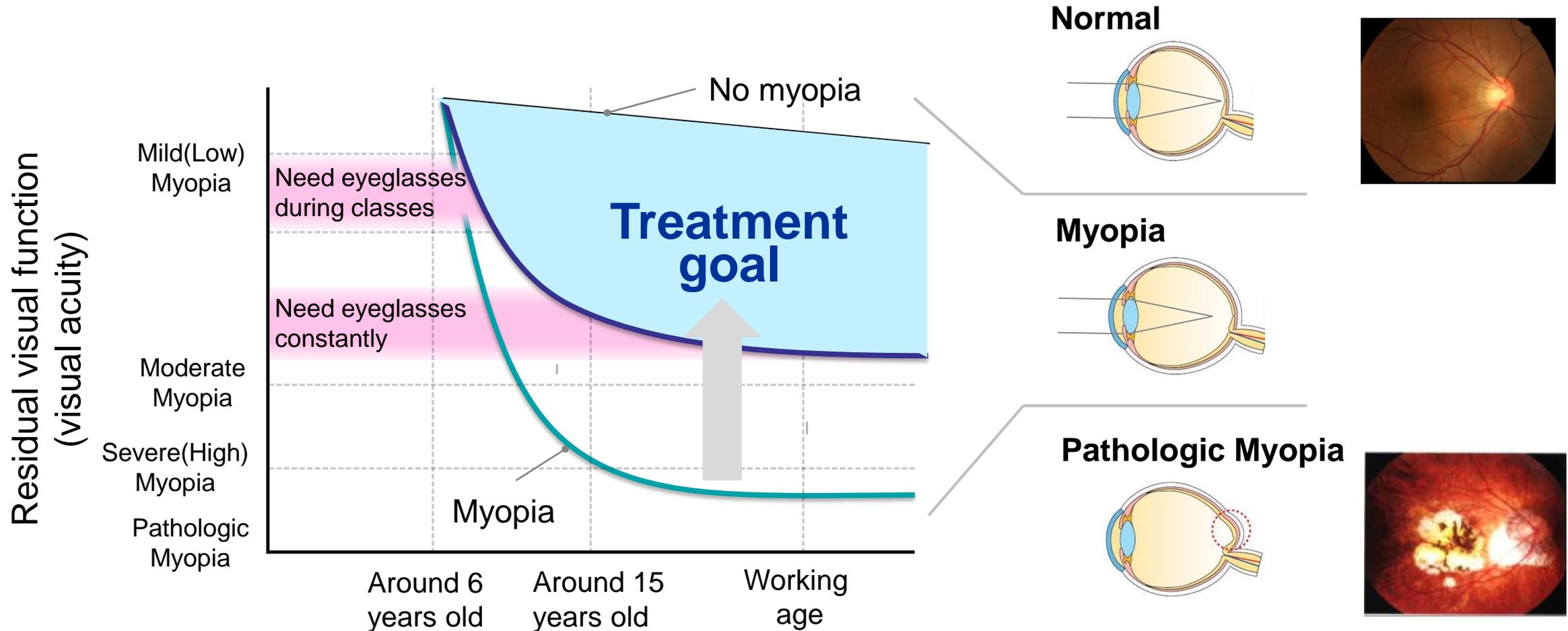
Development with Target Image for Each Disease

		Santen's target
New frontier	Myopia	Protect children from potential risk of blindness
	Presbyopia	Free middle-aged and older people from the hassle of being invisible
	Retinitis pigmentosa	Not giving up hope for treating the disease even though it is a genetic disease
	Ptosis	Better vision opens up more life (including minor patients not requiring surgery)

		Santen's target	Products for sale	Pipeline*
Core business	Glaucoma	Protect lifetime vision by minimizing the burden of eye drops	13	8
	Dry eye	Support “seeing” by eliminating discomfort caused by dry-eye	3	3
	Allergy	Make everyday life free from itchy and painful eyes	4	1

Important to Prevent Progression of Myopia at School Age

One in 3 people in 2020 and **1 in 2 people** in 2050 will suffer from **myopia***1



Develop for Pre-and Post- “Treatment” Flow and After Launch of Low-dose Atropine

Approach to “Protecting Children from Potential Risk of Blindness”



Enlightenment activities
in collaboration with KOL

Collaborative study
with academia to accelerate
elucidation of pathology
and **drug discovery**

Maximization and
commercialization
of low-dose **atropine**

Overcome the challenges
of low-dose atropine with
next-generation drug

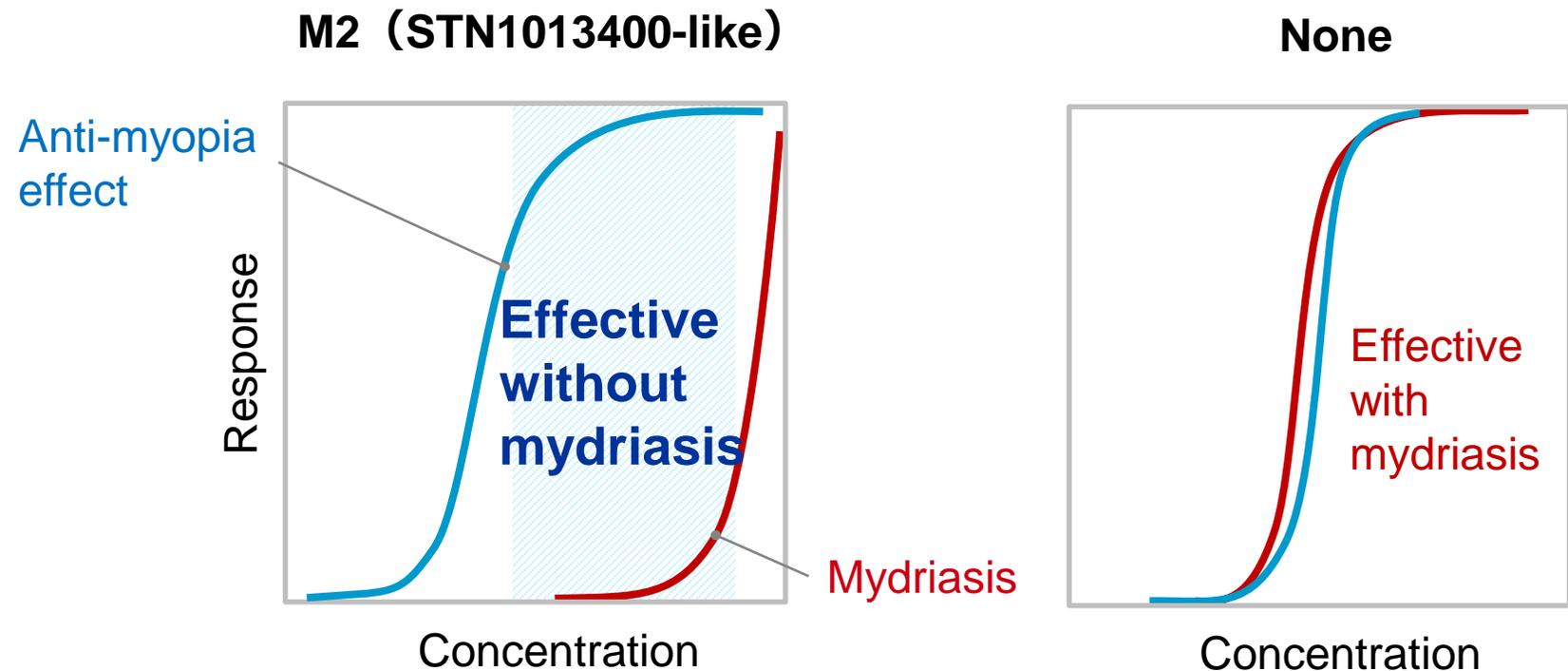
2) Disease Strategy: New Frontier (Myopia)

Pursuing an Anti-myopia Agent not Causing Mydriasis-induced Glare by Increased M2 Selectivity

Receptor Subtype	M1	M2	M3	M4	M5
Anti-Myopia* ¹	No	YES	YES	No	No
Mydriasis* ²	No	No	YES	No	No

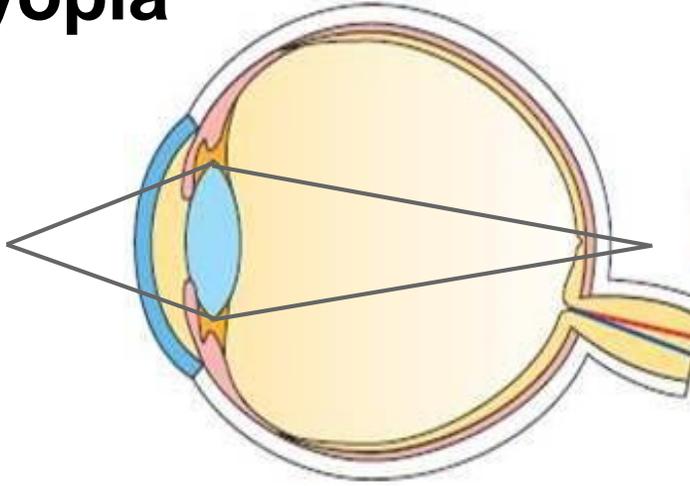
M receptor subtype selectivity:

Concentration-Response curve image:

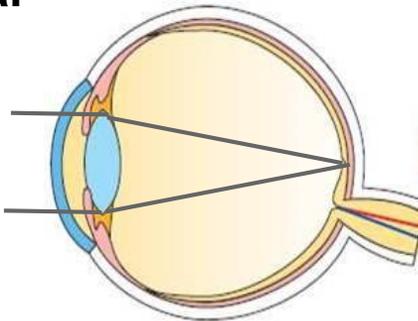


A Disease that Affects Everyone and Significantly Deteriorates Quality of Life

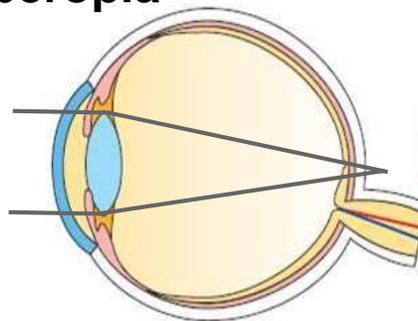
Presbyopia



Normal



Hyperopia



- **Unable to achieve sufficient near vision** due to the decreased accommodation
- Necessary to correct with reading glasses and **troublesome to put on off**
- Various inconveniences, **stiff shoulders, asthenopia, headache, nausea**, etc.

Pioneer New Frontier from Construction of Evaluation System

Approach for “Freeing Middle-aged and Older People from Hassle of Being Invisible”



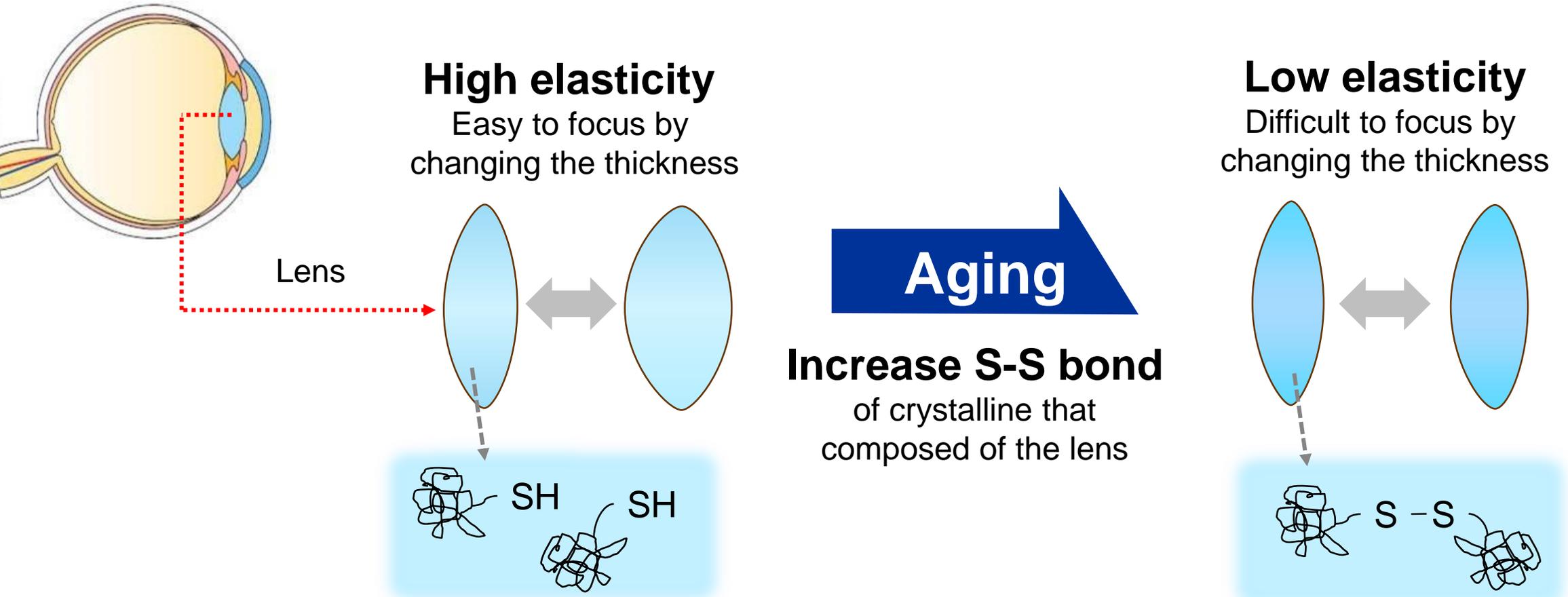
Explore the possible drugs that
maintain lens elasticity

Early POC* verification

**Development of
non-clinical assay
system**

**Establishment of clinical
indicators**

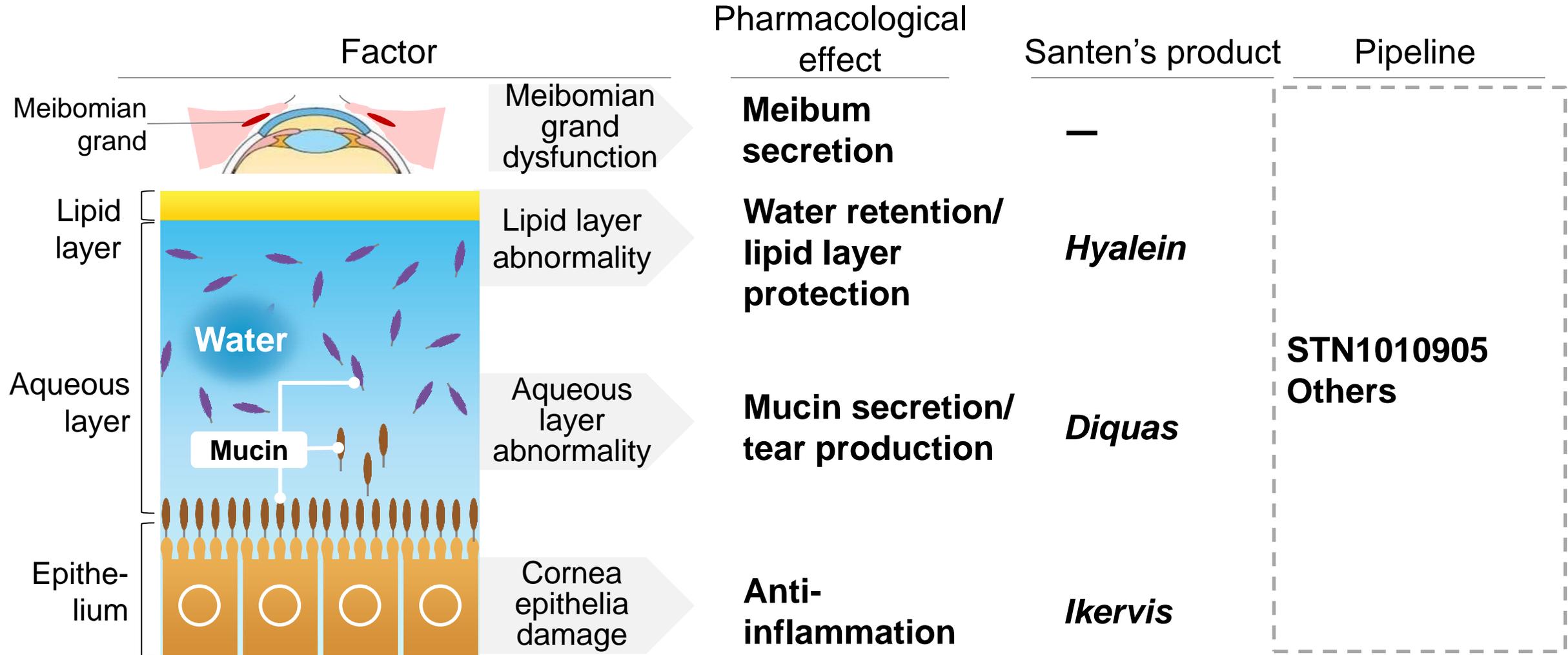
Challenge from the Most Promising Mechanism at Present. Candidate Compounds Already Identified



Development candidate have been selected based on the elasticity of the lens

2) Disease Strategy: Core Business (Dry eye)

Develop and Sell Products Tailored to Factors Lead Innovation Through Further Expansion



Tackling Solutions other than IOP Lowering Agents through Collaboration with

Approach to “Protecting Lifetime Vision
by Minimizing the Burden of Eye Drops”



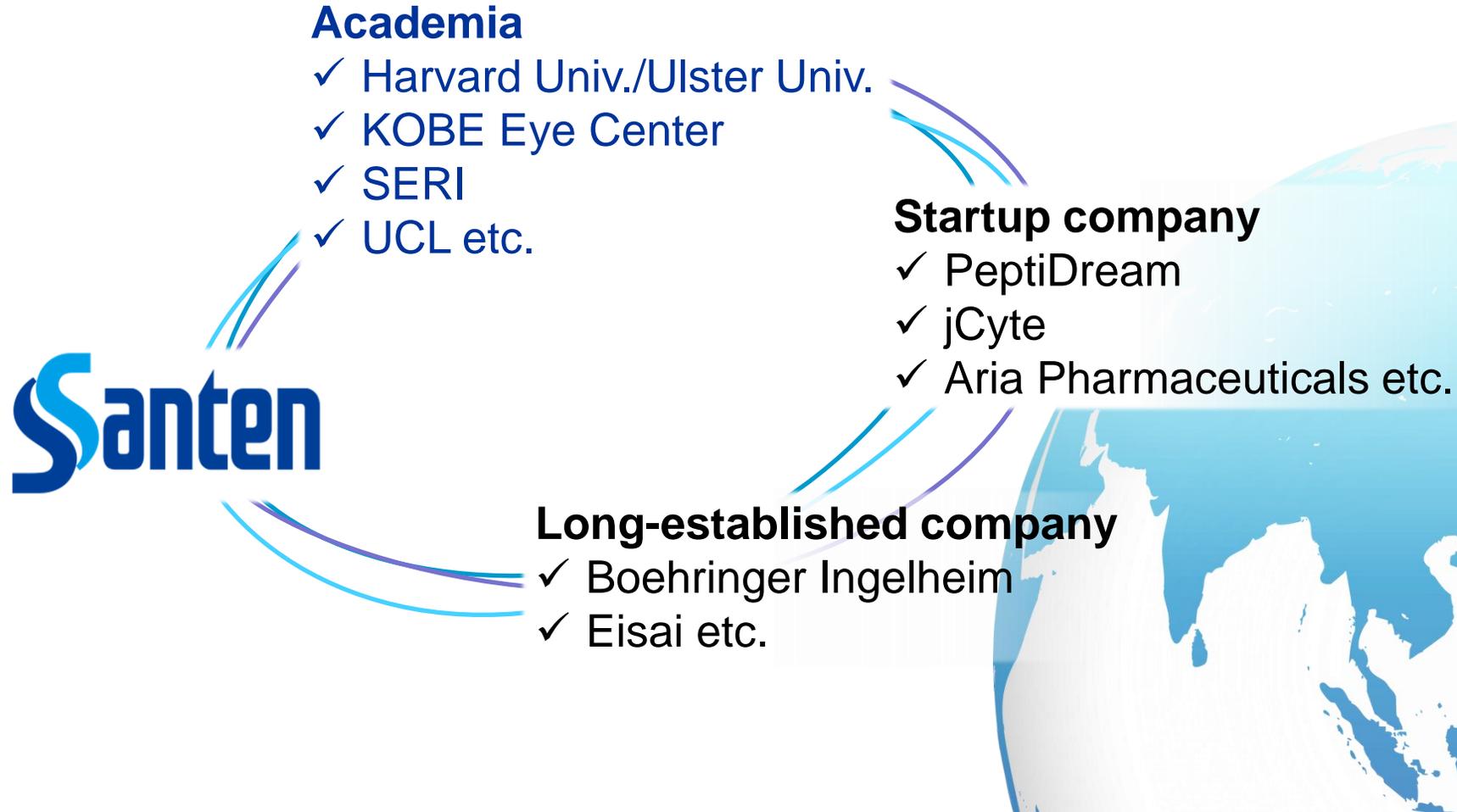
**Correspondence to
surgical operation**

MIGS

Optic nerve protection

to control visual disturbance

Santen Evaluates Approximately 100 of New Technologies and Modalities per Year



3) Network

Innovate Ophthalmology with Prestigious Research Institutes Around the World

Ulster University

Retina & optic
nerve protection

Glaucoma

University College London (UCL)

Retina & optic
nerve protection

Kobe Eye Center

Retinitis
Pigmentosa

Harvard University (Mass. Eye & Ear Institute)

Retina & optic
nerve protection

Glaucoma

Singapore Eye Research Institute (SERI)

Myopia

Diabetic
Retinopathy

Glaucoma

Dry eye

New Leadership Team will Further Elaborate Disease Strategies and Firmly Explore Potential Treatments



Reza Haque
Head



Takeo Hirose
Representative Head



Sreenivasu Mudumba
Vice President,
Therapeutic Modality
Innovation



Najam Sharif
Vice President,
Global Alliance and
External Research



Almira Chabi
Vice President,
Glaucoma and
Neuroprotection,
Therapeutic Area Strategy



Abu Abraham
Vice President,
Vitreous and Retina,
Therapeutic Area Strategy



Hisao Shimada
General Manager,
Ocular Surface and
Anterior Segment,
Therapeutic Area Strategy



Takahiro Imanaka
General Manager,
Clinical Pharmacology and
Biomarkers



Peter Sallstig, MD, MBA
Corporate Officer,
Head of Product Development
Division

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Maximize Product Values of POC-acquired Pipelines, Ensure Commercialize Them



**1) Development
strategy**

**2) Maximized
product value**

**3) Global operation
excellence**

Keep Higher Success Rate of Phase 3 Study than the Industry Average

Average of competitors*

54%

VS.

Santen

83%

2010-2020

Future risks

Facing development difficulty due to challenges in new areas and new modalities

*Internal analysis using the competitor data (2010-2016) provided by Clarivate Analytics

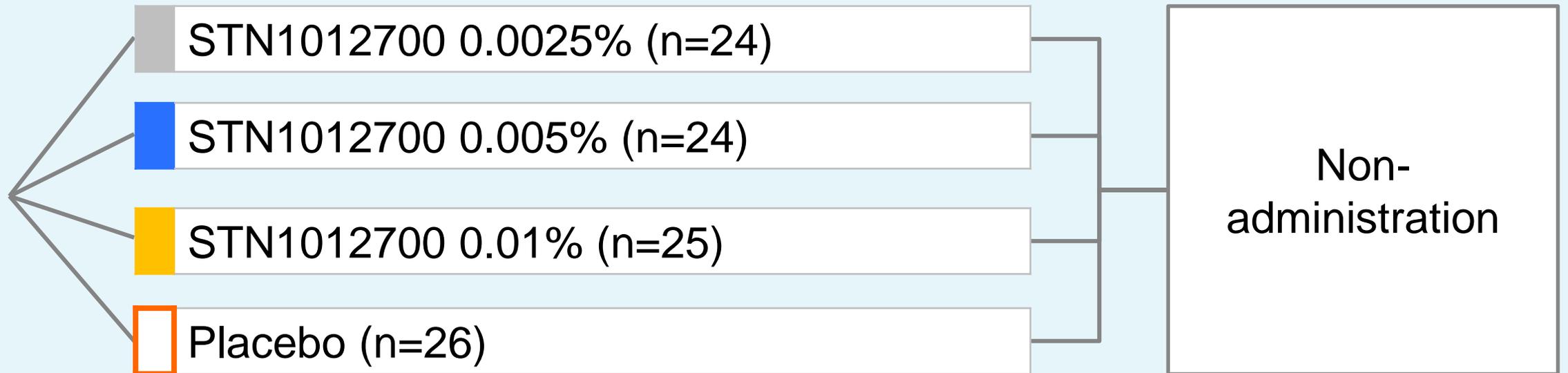
Acquire POC Early in Singapore Where There is a Well-established Clinical Trial Environment

【Study design of phase 2 clinical trial (APPLE study)】

Randomized double-blind trial

Treatment period (12 month)

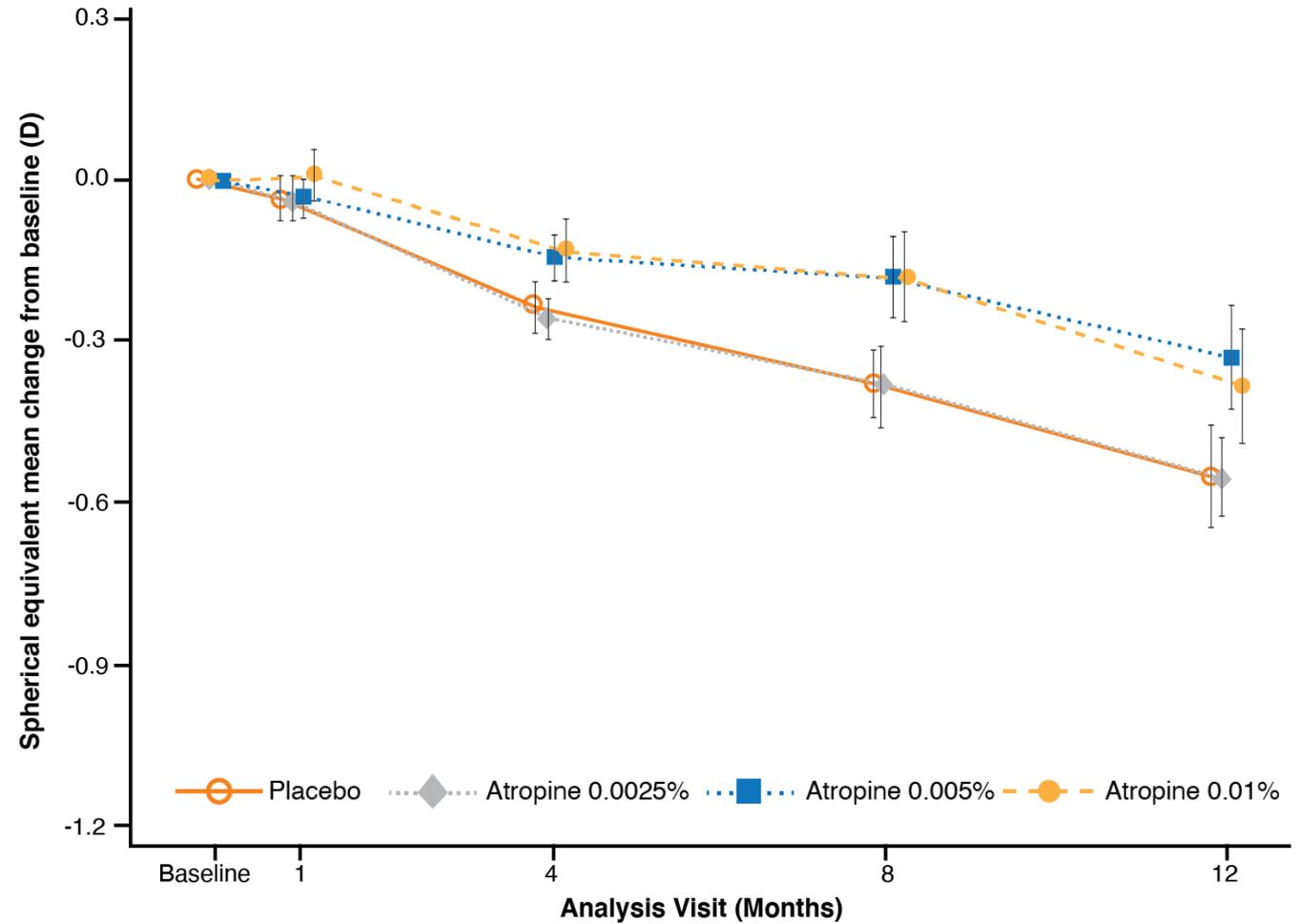
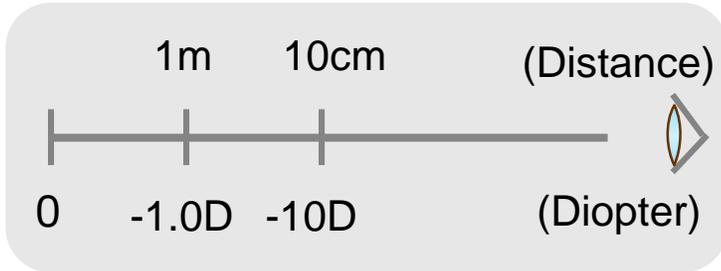
Follow up period (6 month)



*One drop in each eye before bedtime

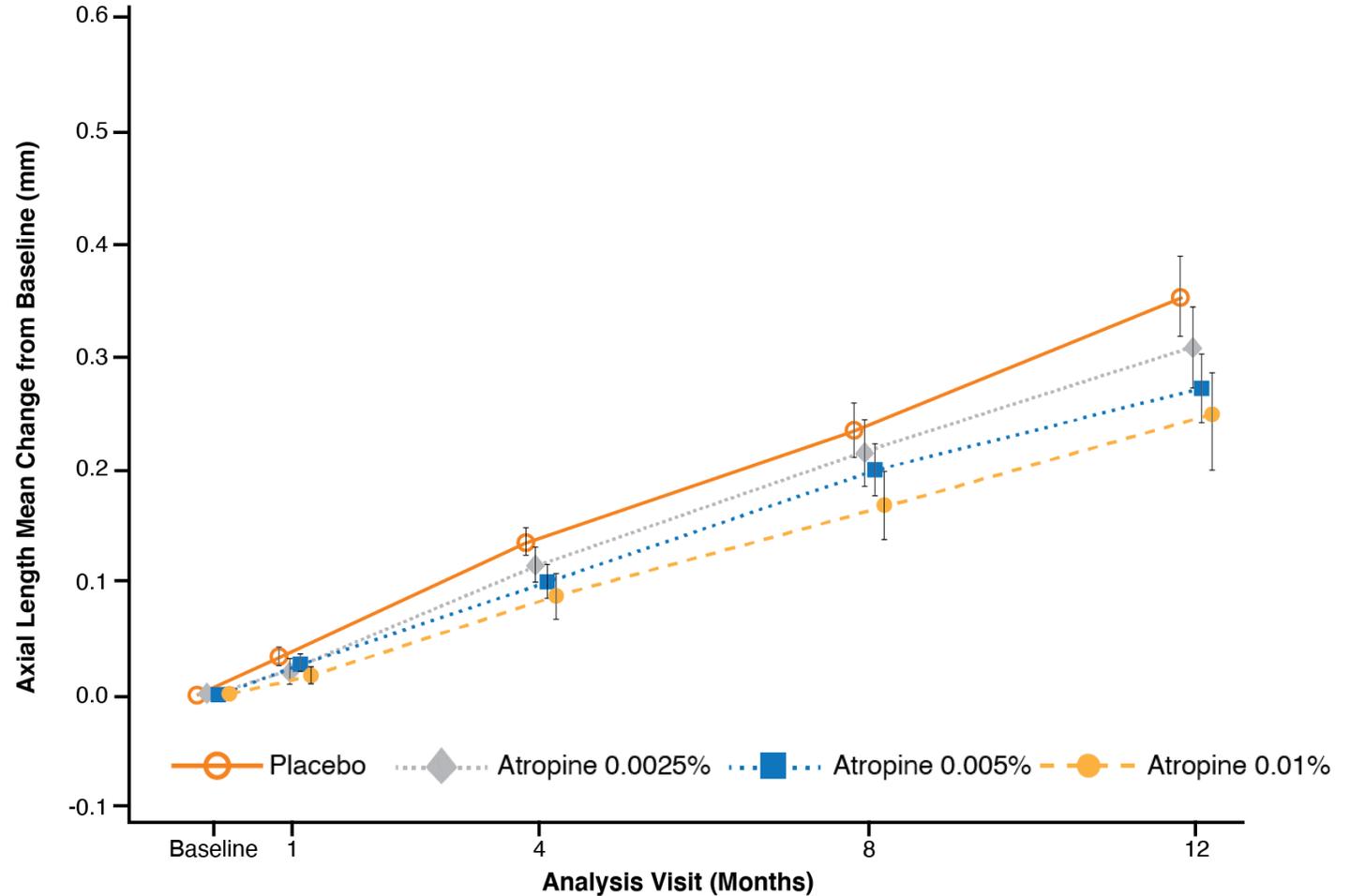
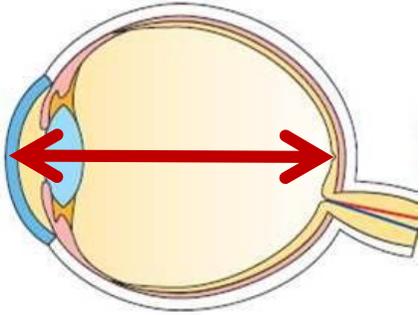
STN1012700 Inhibited the Spherical Equivalent Change*

1) Spherical equivalent



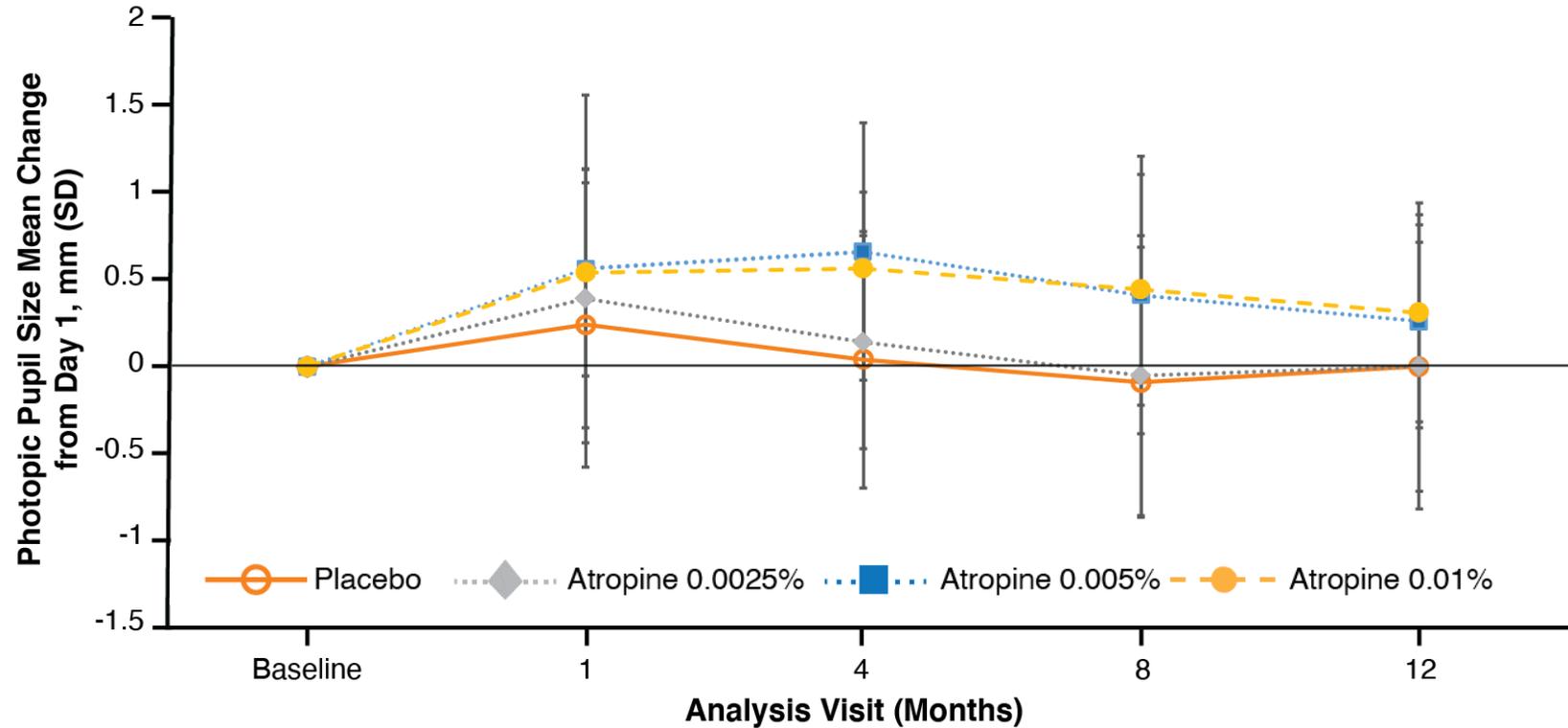
STN1012700 Inhibited the Elongation of Axial Length*

2) Axial length



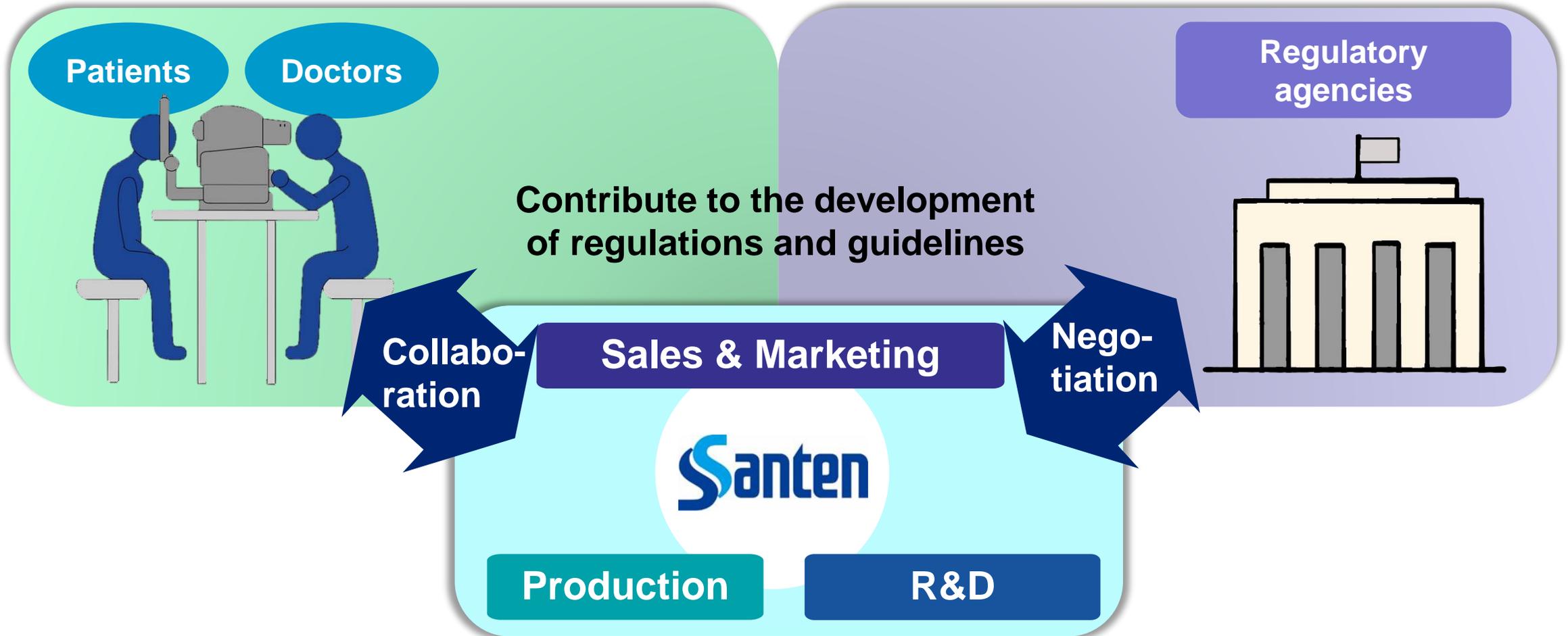
STN1012700 Caused Only Slight Change of Pupil Size*

3) Pupil size



1) Development Strategy

Build an Integrated Development System in Collaboration with Ophthalmology-related Medical Professionals and Regulatory Agencies



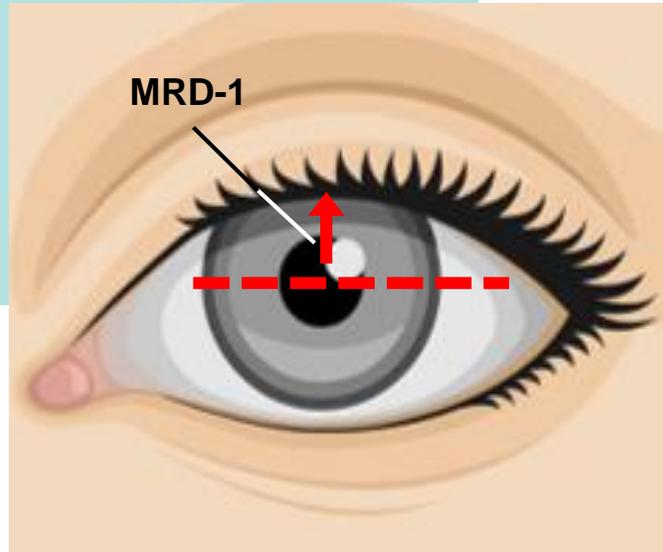
Upneeq Significantly Improved the Droopy Eyelid.

Phase 3 clinical trial (US)

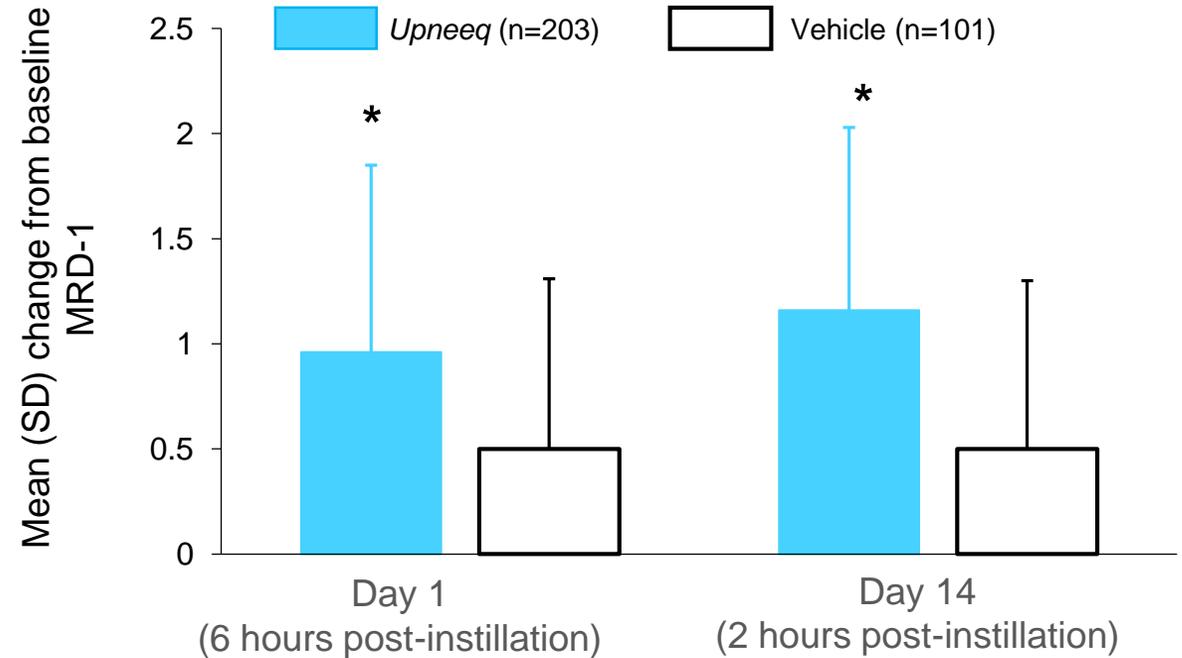


Marginal Reflex Distance 1 (MRD-1)

is the distance from the light reflex to the upper lid margin



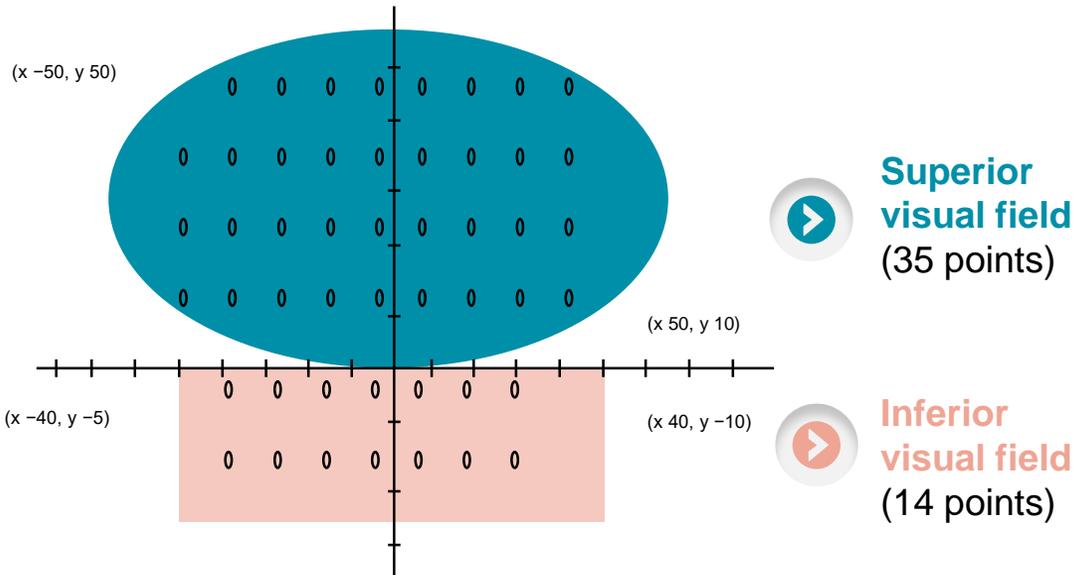
Upneeq significantly increased upper eyelid lift



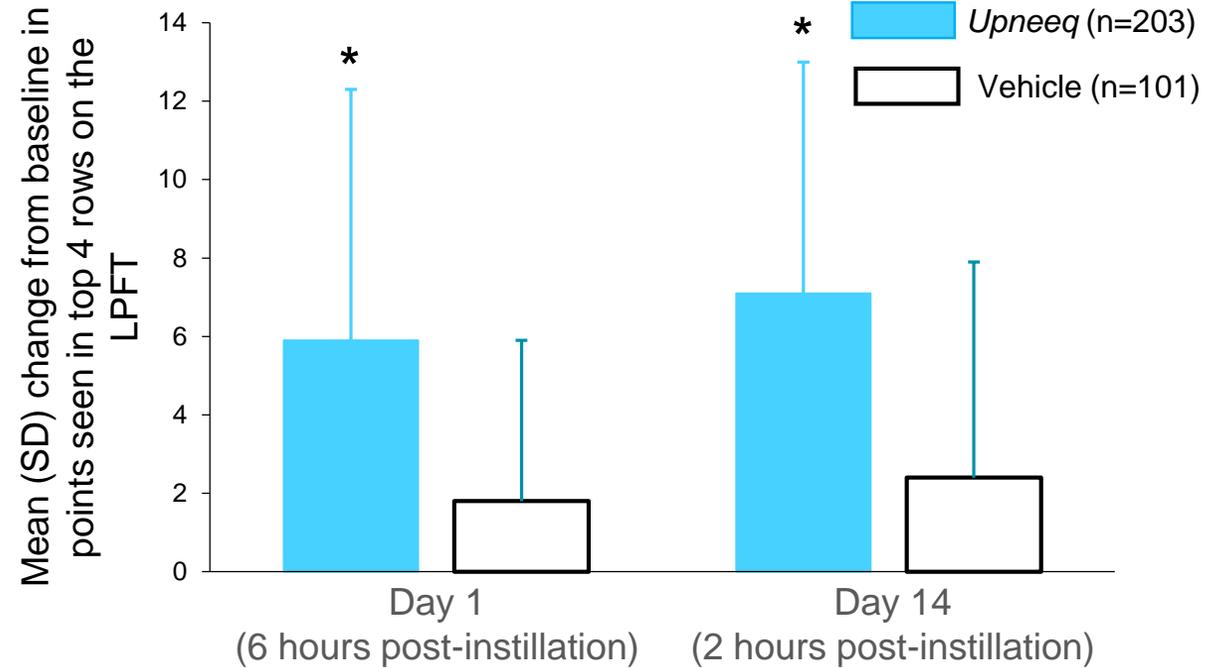
Upneeq Significantly Improved Superior Visual Field Deficits.

Phase 3 clinical trial (US)

The Leicester Peripheral Field Test (LPFT) measures the superior visual field



Upneeq significantly improved superior visual field deficits



* p<0.0001 vs. vehicle

First development in Asia / Japan based on US data

Breaking Up Heredity Barriers. Implementing a New Approach in Cell Therapy

【Clinical trial design of phase 2b】

Subjects ≥ 18 years of age with:

Clinical diagnosis of RP and BCVA of 20/80 – 20/800 in the study eye (ETDRS protocol)
Absence of macular edema or other ocular disease that impairs visual function

84 subjects randomized 1:1:1 at 3 US sites

Sham
(n=29)

3.0×10^6 jCell
(n=27)

6.0×10^6 jCell
(n=27)

Primary Endpoint
Mean change in BCVA from baseline to 12 months

* **BCVA Change**

(ETDRS letters)

Normal visual acuity test

Measure the number of characters that can be read

N C K Z O

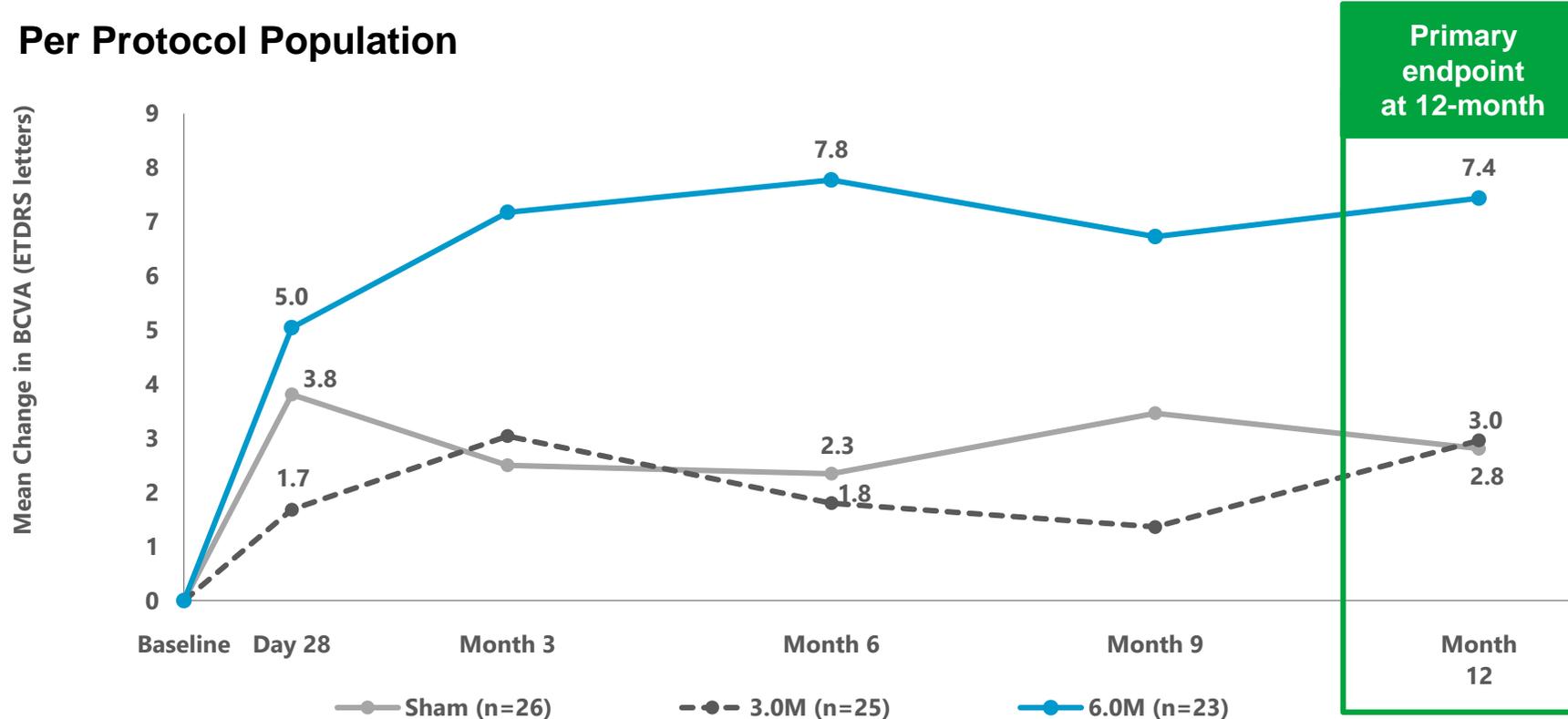
R H S D K

D O V H R

C Z R H S

1) Development Strategy (Retinitis Pigmentosa)

The Per Protocol Analysis Showed a Trend Towards Meaningful Differences Between the Control (Sham) and the 6×10^6 Group.



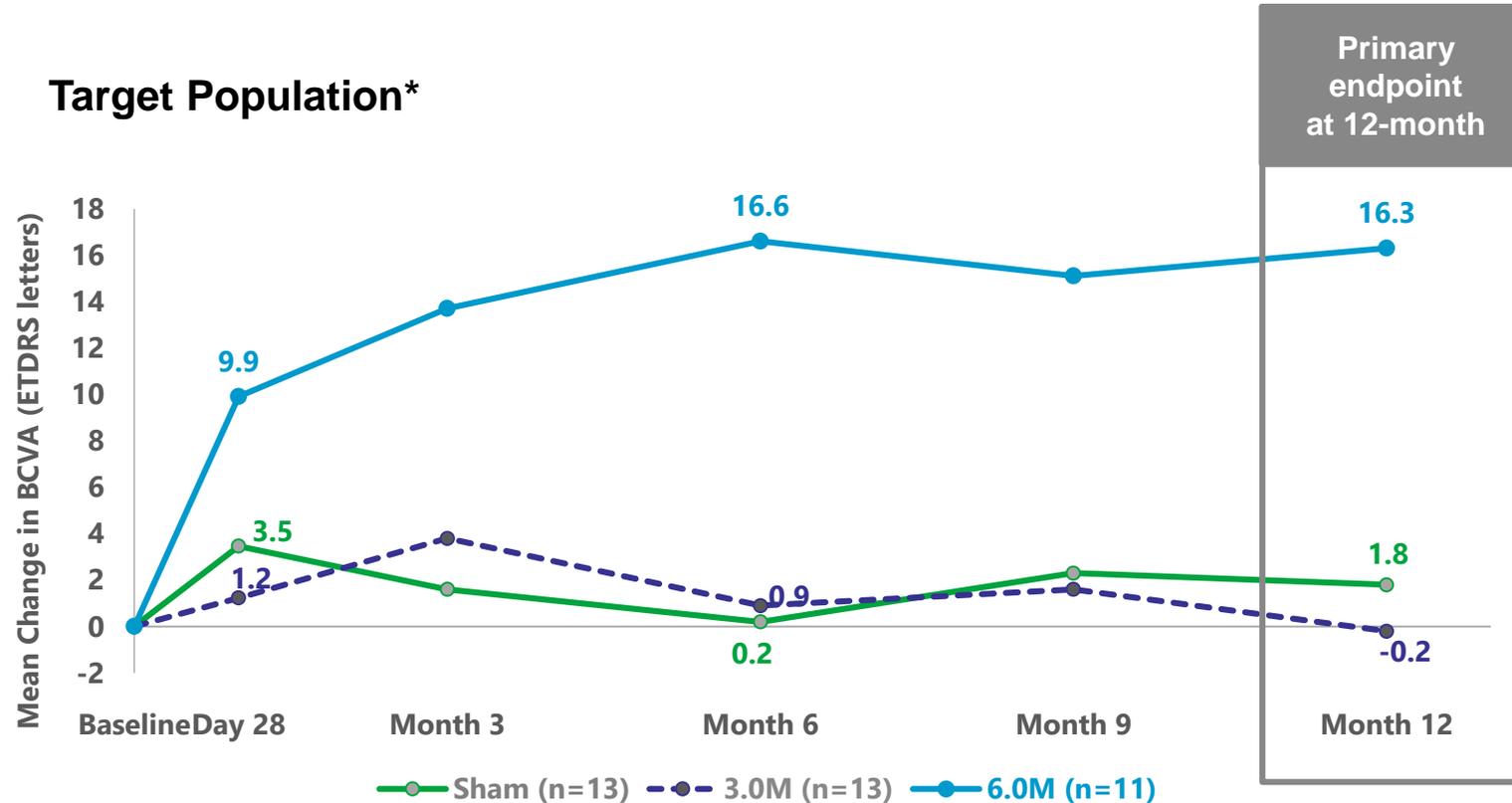
Per Protocol Population (n=74)

6.0M vs. Sham: BL to 6mo = +5.43 ($p = 0.070$); BL to 12mo = +4.63 ($p = 0.099$)

3.0M: 3.0×10^6 hRPC, 6.0M: 6.0×10^6 hRPC

1) Development Strategy (Retinitis Pigmentosa)

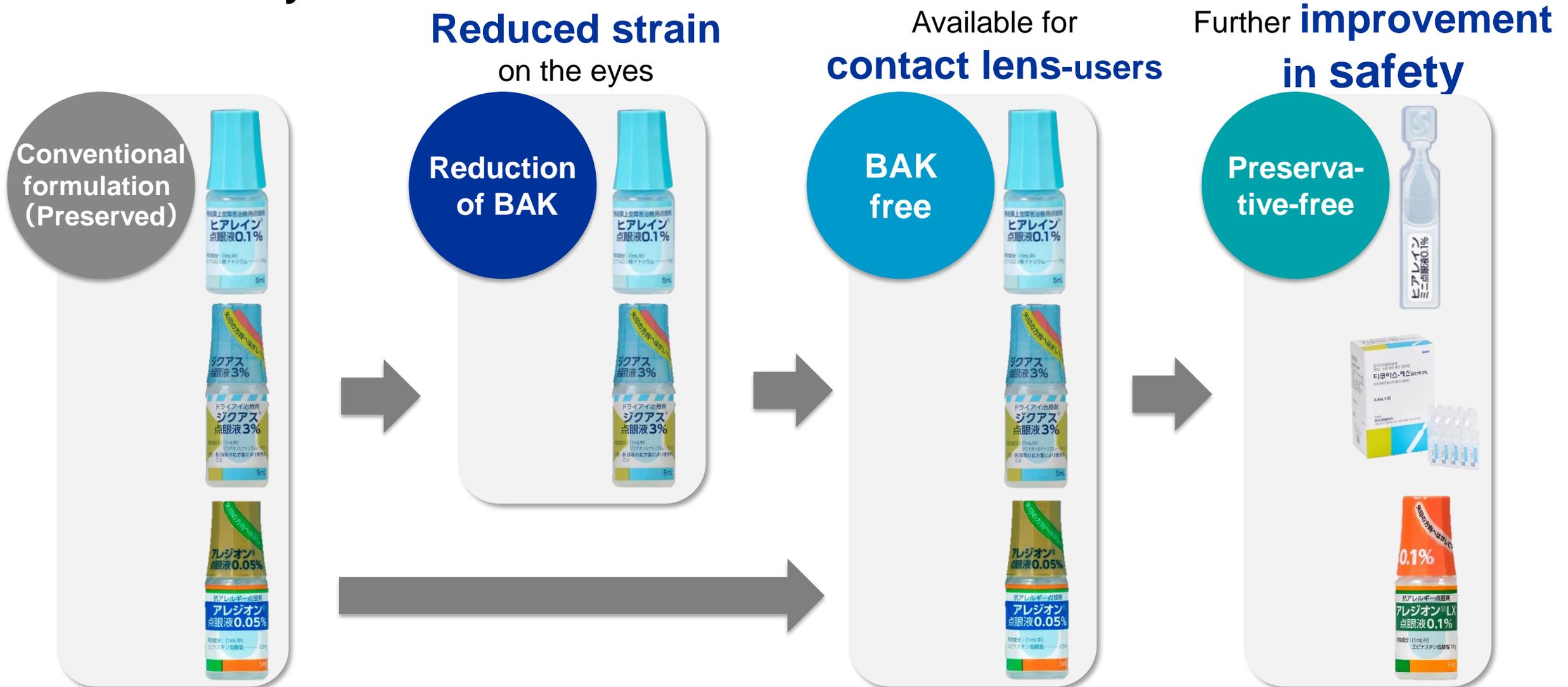
The BCVA in the 6 x 10⁶ Group at 12 Months was Significantly Improved Compared to the Control (Sham) Group.



*Target patient population (n=37), 6.0M vs sham: baseline to 6 months = +16.45 (P=0.002); baseline to 12 months = +14.43 (P=0.003).
BCVA, best corrected visual acuity; ETDRS, early treatment diabetic retinopathy study; M, million.
Santen data on file: jCyte. jCell presentation, 27 October 2020. 3.0M: 3.0x10⁶ hRPC, 6.0M: 6.0x10⁶ hRPC

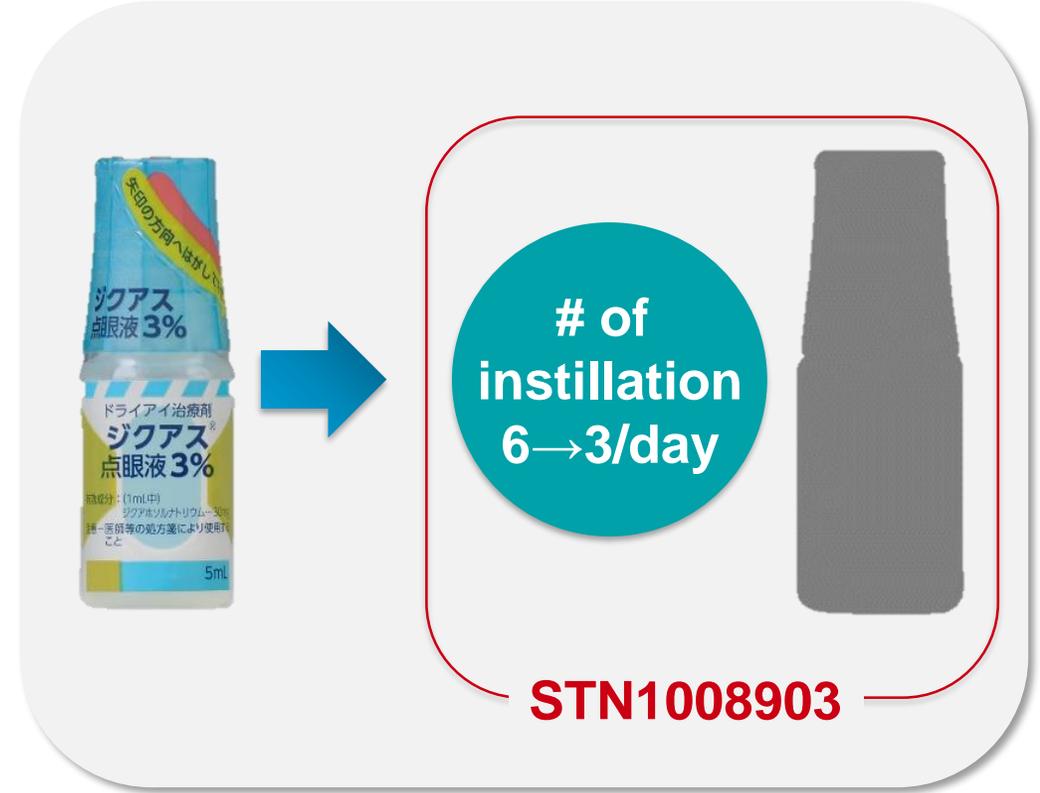
2) Maximized Product Value

Santen's Unparalleled Formulation – Continuous Product Improvement for Further Safety



2) Maximized Product Value

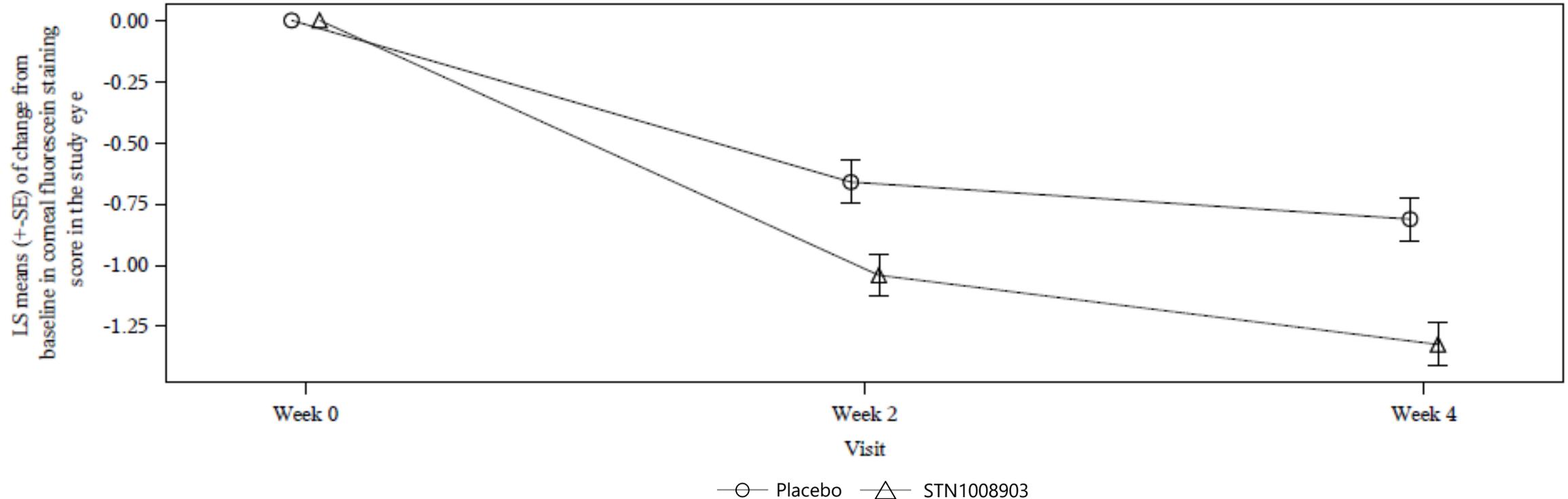
Santen's Unparalleled Formulation – Improve Medication Adherence



2) Maximized Product Value (Dry Eye)

STN1008903, *Diquas* New Formulation, Maintained the Improved Effect on Corneal Epithelial Disorders. (Submitted NDA on Aug 30th, 2021, in Japan)

P3 clinical trial (Japan)



Eased Patient's Burden by Reducing Dosing Frequency. Improved Markedly Adherence of Instillation

Phase 3b (Japan)

Post-completion Surveys

Which was more burdensome?

3 times daily
STN1008903

7/59 (**11.9%**)

6 times daily
Diquas

52/59 (**88.1%**)

2) Maximized Product Value

Respond to Various Needs as a Specialized Company in Ophthalmology



**Biomass plastic
bottle**

Global



**PFMD
bottle**

**Mainly in EMEA
and Asia**



**Eye drop
aid**

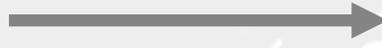
**Mainly in EMEA
and Japan**



3) Global Operation Excellence

Organization that can Execute Global Development from Early Research to Commercialization of a Project

Development & launch in Japan



Overseas expansion

- ✓ Established a department to perform global clinical development
- ✓ Established China R&D department to strengthen product development in the Chinese market
- ✓ Strengthened global project management to refine development strategy

Commercializing products swiftly and efficiently

3) Global Operation Excellence: US Development

Invite Experienced People to US Development Organization, Accumulating Achievements by Penetrating their New Experiences Internally

Development organization

- **Established the global clinical development & operation department** to set clinical strategy & manage operations in US, EMEA, Japan and Asia

Development process

- Refined US clinical study designs **by close discussion with FDA**
- Strengthen partnership with US Principal Investigators
- **Strengthen the process to choose clinical study sites** in US
- **Strengthen engagement with US Payers**
- **Realize remote** clinical development in part

Achievement

- STN1012600: US P2 **accelerated**, EU Exploratory study initiated
- STN1007603: **Approval** in the US
- STN1011700: NDA in the US (PDUFA Nov 19th 2021)



Uday Arulmani
Global Clinical
Development &
Operations
Department Head
Vice President

Strengthen China R&D Further for Best-in-Class Product development

Development direction

- **Global Parallel Development or Development alone in China**
to Grasp China's regulatory and Patient Needs

Development organization

- **Established a management department**
Started with strengthening clinical development and project management

Development process

- Ensure consultations with China authority
- **Develop clinical trial sites throughout China**
- Contract with patient recruitment company and accelerate clinical trials
- **Form communities with KOLs and Health Authorities**



Kenji Morishima
Corporate Officer
China R&D
Department Head

New Leadership Team is Committed to Enhanced Product Development Excellence for the Core Business as well as Disease Areas with Growth Potential



Peter Sallstig
Head,
Representative, US R&D,
Corporate Officer



Kenji Morishima
Head of China Product
Development,
Representative, Asia R&D,
Corporate Officer



Uday Arulmani
Vice President,
Global Clinical Development
& Operations



Kazuhito Yamada
Head of Pharmaceuticals and
Pharmacology Department,
Representative, Japan R&D



Flavio Lima
Vice President,
Global Medical Affairs



Franz Buchholzer
Vice President,
Global Regulatory Affairs



Kay Tatsuoka
Vice President,
Global Data Science



Jean-Sebastien Garrigue
Vice President,
Representative, EMEA R&D



Yoshikazu Matsumoto
General Manager,
Global Project Management



Hiroshi Tanaka
General Manager,
R&D Quality Management



Takeshi Matsugi
General Manager,
R&D Strategic Operations



Hiroki Sakai, Ph.D.

General Manager,
Portfolio Strategy & Global
Marketing Group, Corporate
Development Division

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Santen Leads Global Myopia Market based on the Capability and Experience of Global Ophthalmology Specialty Company.

Global myopia business development (STN1012700 + SYD-101)

STN1013300/13400

Global Myopia Brand

Santen

STN1012700 + SYD-101



Strength of global Santen

Myopia Global brand expansion
Data generation/case accumulation in regions
Large-scale production & robust supply chain

Market penetration in each region

Patient care management with doctors
Product distribution network

Established a Treatment Management Method for Myopia Patients by Adopting Treatment Experience and New Monitoring Technology for with Doctors

Patient enlightenment and disease monitoring

planoApp

World's 1st science-based screen time parental control app that protects your child's eyes



Establishment of myopia patient management

Treatment management in collaboration with doctors

- Established guideline
- Categorization of mild and severe patients
- Appropriate treatment combination
- Compliance improvement etc.

Experience in building ophthalmic markets

aligned with doctors and academic societies in Japan, China and Asian market

Globally accumulated myopia patient data

<https://plano.co/>

Based on the World's Largest Ophthalmic Eye Drop Production Capacity, Ensuring the Product Supply to Meet the Diverse Patient Needs

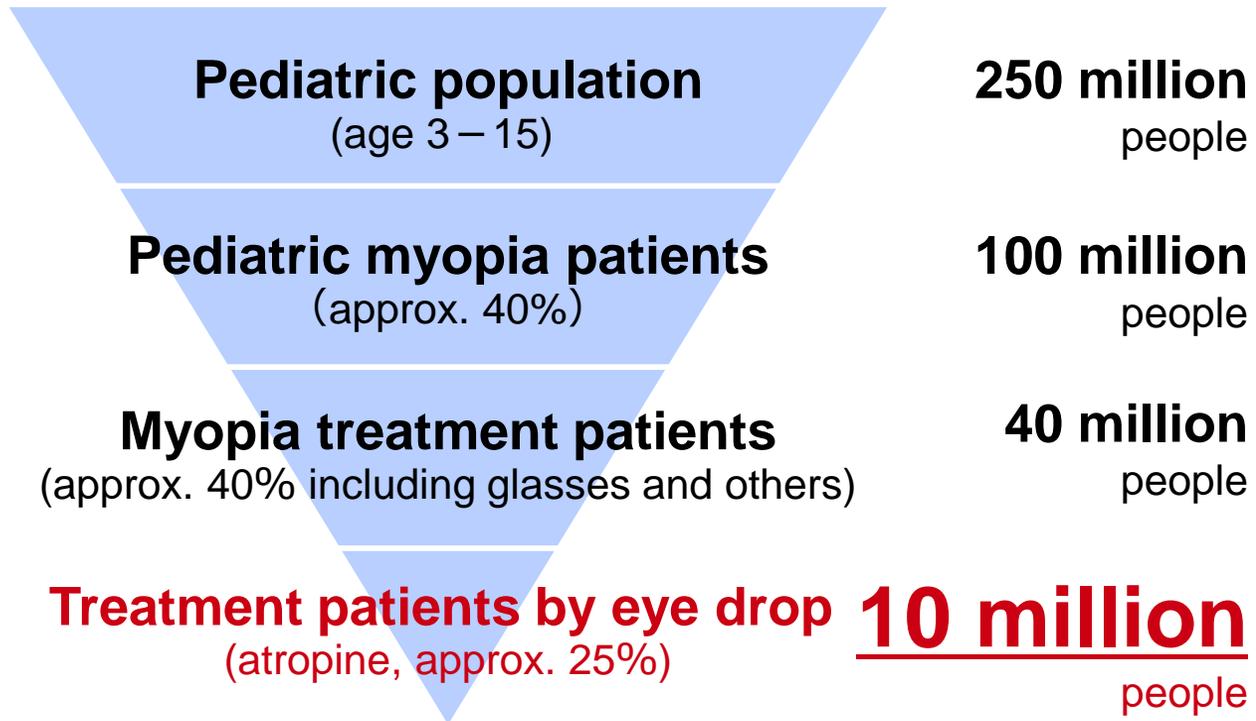
- Large-scale eye drop production:
Approx. **400million** bottles in FY2020
- Achieved **large-scale and low-cost production** by automation and labor saving
- Suzhou plant :
Acquired EU-GMP, the only ophthalmic pharmaceutical company in China
Technology / quality / production capacity
- Suzhou new plant (under construction):
World's largest and latest equipment
Further strengthen the competitive advantage of product supply requiring large-scale production such as myopia



Supporting a Better Life and the Children's Future by Providing and Permeating Treatment for Increasing Pediatric Myopia Patients due to Lifestyle Changes

Estimated number of Chinese myopia eye drop treatment patients*1

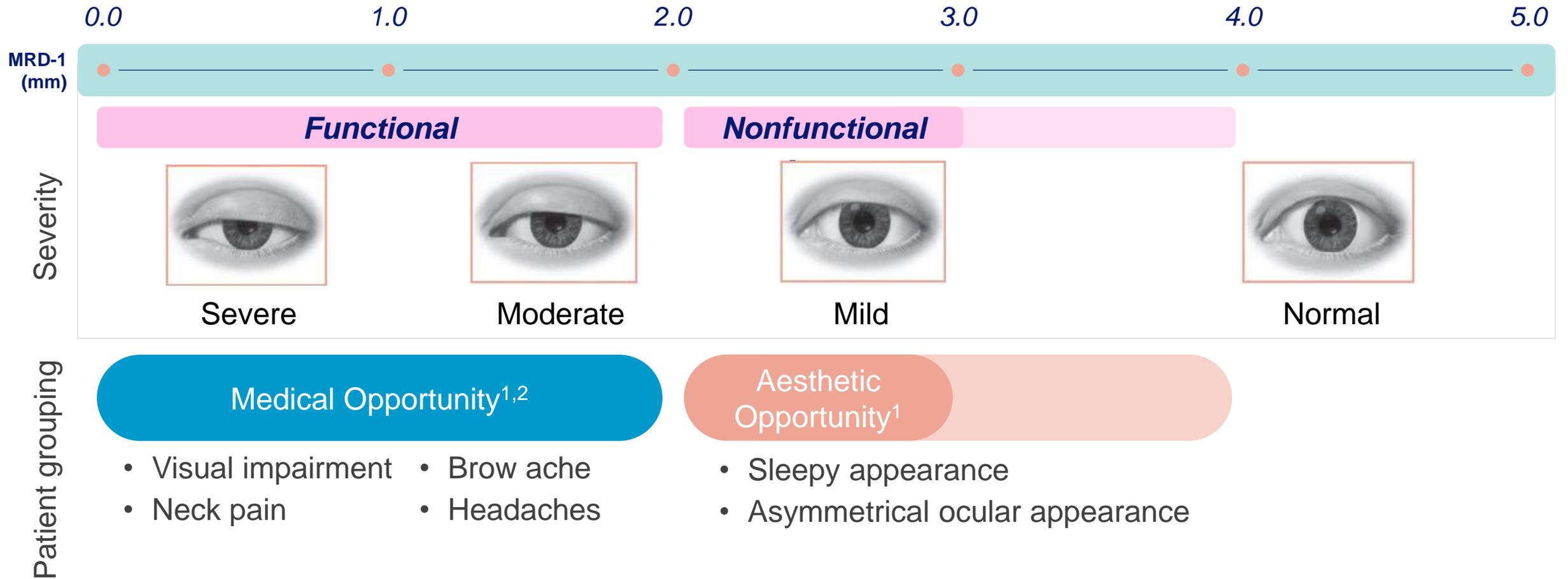
Reason for increasing myopia treatment patients



- Promotion of myopia control program by **government and public institutions**
- **Raise public awareness** of myopia treatment
- Increase in near vision work due to **lifestyle changes by COVID-19**

Only Patients with Visual Field Problems Have Been Diagnosed, and Mild Patients are not Well Cared for due to No Cure Other than Surgery

Severity classification of ptosis and patient grouping

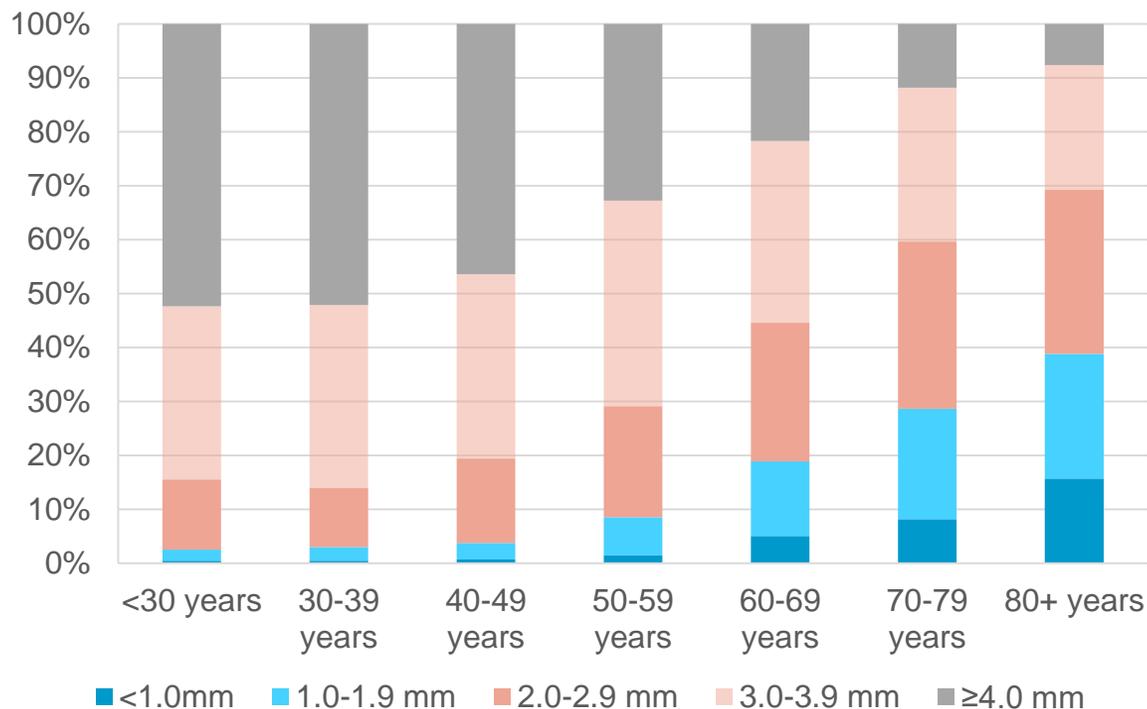


1. Richards, HS, Jenkinson E, Rumsey N, et al. The psychological well-being and appearance concerns of patients presenting with ptosis. *Eye*. 2014;28(3):296-302. 2. Finsterer J. Ptosis: causes, presentation, and management. *Aesthetic Plast Surg*. 2003;27:193-204. unilateral ptosis and avoiding contralateral ptosis. *Aesthet Surg J*. 2010;30:320-328.

Most of Medium-Severe Patients are Elderly, but There Are Great Opportunities When Including Young People with Mildly Patients



% of each segment by MRD-1 (mm) ¹



Aesthetic Opportunity

Medical Opportunity

% in population above age 30s

Ave. age

18.8%

40 – 50s

9.8%

60s

1. Paik JS, Han K, Yang SW, Park Y, Na K, Cho W, Jung SK, Kim S. Blepharoptosis among Korean adults: age-related prevalence and threshold age for evaluation. *BMC Ophthalmol.* 2020 Mar 13;20(1):99. Kim MH, Cho J, Zhao D, et al. Prevalence and associated factors of blepharoptosis in Korean adult population: the Korea National Health and Nutrition Examination Survey. *Eye (Lond).* 2017;31:940-946.

STN1013800 is the World's First Ptosis Drug Treatment with Excellent Immediate Effect and Safety (It Can be Applied to Both Medical and Aesthetic Patients)

Upneeq (US) -STN1013800



Lift Eye-lid

To improve vision

Clear and Immediate Effect

Eye-lids lifted in 5 mins,
effect lasts 6-8 hours

Safety

Oxymetazoline is a well-known asset used for OTC globally

Medical Opportunity

First eye-drop medical solution

for ptosis patient

(current treatment is surgery only)



Aesthetic Opportunity

The new value

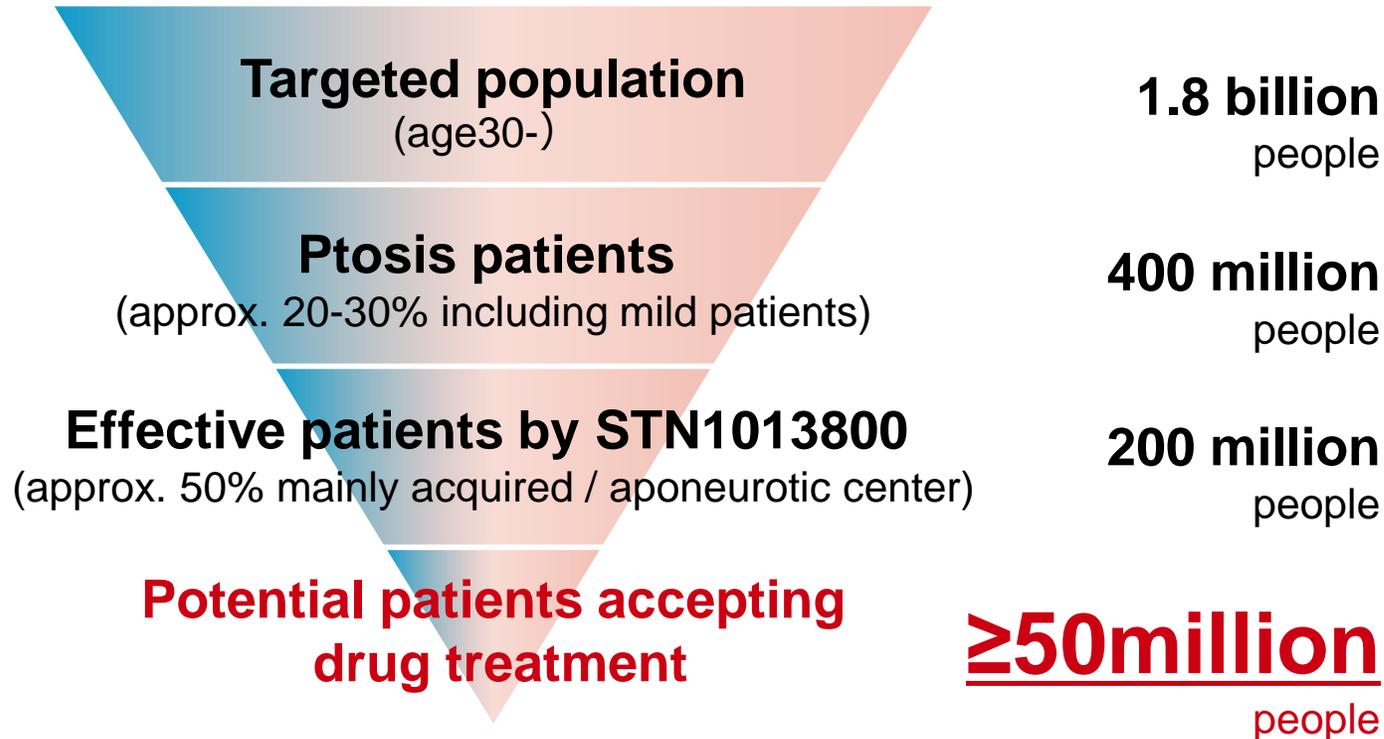
for people who is concern
about sleepy or asymmetrical
ocular appearance



Go To Market Initiatives* Are the Key to Achieving Product Dissemination to a Wide Range of Patients for Diseases with No Therapeutic Drug.

*Example of Go To Market initiatives: disease recognition and product access

Estimated number of patients with treatment potential for ptosis in Europe, Asia, China and Japan*¹



Points of maximizing product value

- **Recognition** of disease and product
- **Access** for treatment and product
- **Price acceptability** of non-reimbursement drugs



Shigeo Taniuchi
President &
Chief Executive Officer

- 1. Santen's Product Development**
- 2. Enrich Pipeline based on Patient's Needs**
- 3. Pursue Added Value by Steadily Promoting Product Development**
- 4. Improve Portfolio Value through Industrialization and Commercialization**

5. Summary

Appendix

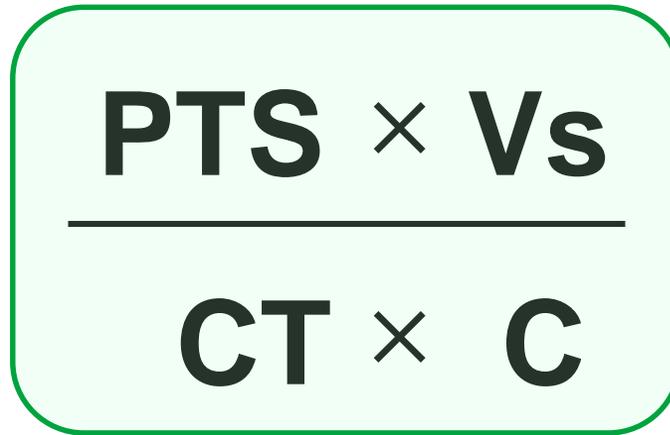
Contribute to Future Profitability from Product Development

Portfolio Value



Capability to efficiently search for seeds based on patient needs and incorporate them into the pipeline

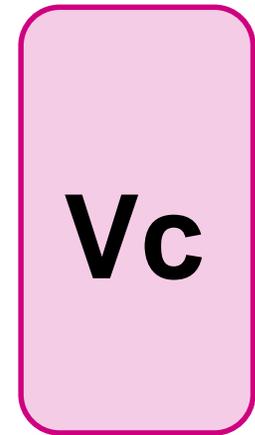
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Global development capabilities to

- ✓ improve the probability of success in clinical trials
- ✓ differentiate with scientific evidence
- ✓ optimize time and cost

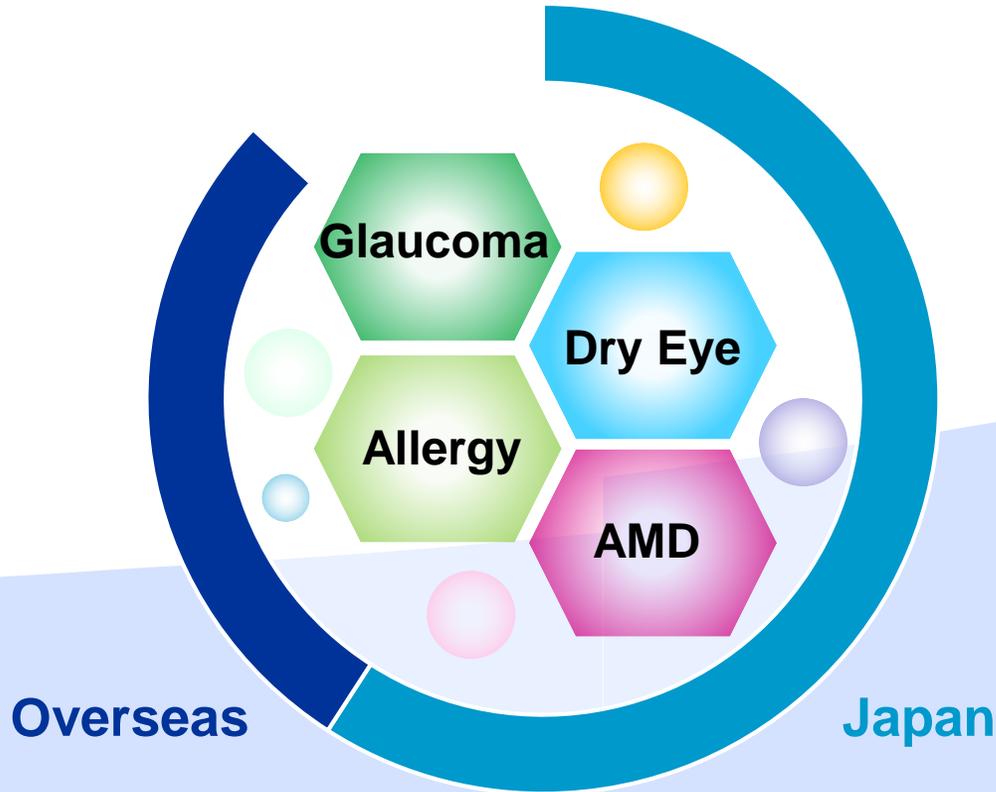
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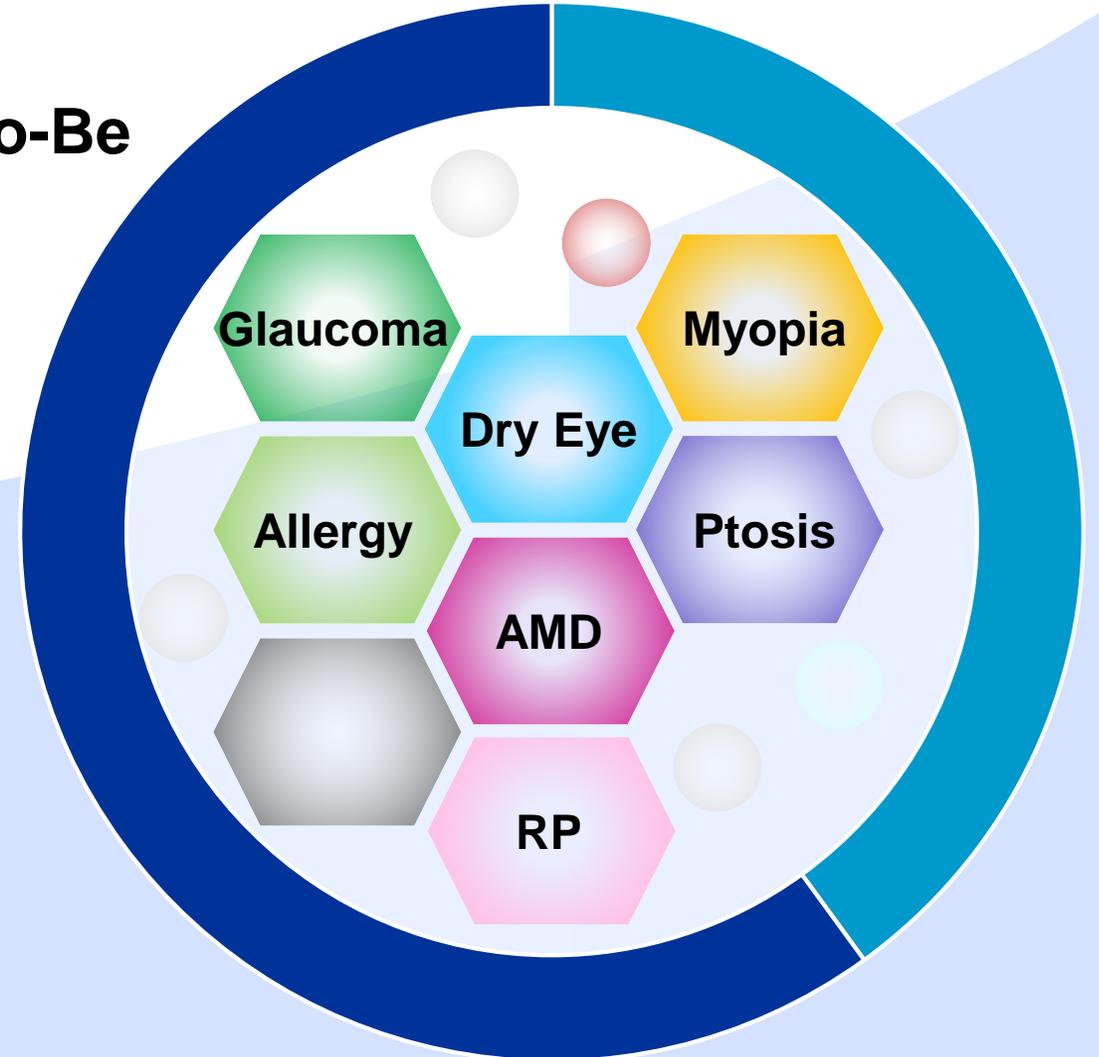
Capability to commercialize and maximize value in the market

Realize Long-term Growth by Improving Portfolio Value and Expanding and Strengthening Regions

As-Is



To-Be



- 1. Santen's Product Development**
- 2. Enrich Pipeline based on Patient's Needs**
- 3. Pursue Added Value by Steadily Promoting Product Development**
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- 5. Summary**

Appendix

Short-term Event Schedule in Research & Development

Pursue the Steady Progress in Pipeline

	Area	Project	FY20	FY21	FY22
New growth	Myopia	STN1012700 (JP)	Ph2 TLRs	Publication	
		STN1013400 (JP)		P1 start	
	Ptosis	STN1013800 (JP, Asia, EMEA)	In-license	Asia:NDA planned	
			JP, EMEA: Clin. Study prepared		
Core business	Cell therapy	jCell (JP)	In-license	US:Ph2 end expected	
				JP : Development prepared	
	Glaucoma	Eybelis (US) STN1012600 (JP, US, EMEA) STN1013900 (JP) Tapros/Tapcom with new instillation system(JP) PRESERFLO MicroShunt (Asia, JP)	In-license	US PDUFA	
Ph2 TLRs					
1 st Ph3 results					
NDA					
			JP: NDA		
Vernal conjunctivitis	Verkazia (US, CN)		US App	US Launch planned	
Dry Eye	Diquas new formulation (JP)		NDA	App expected	

