ANNEX I

SUMMARY OF PRODUCT CHARACTERISTICS

1. NAME OF THE MEDICINAL PRODUCT

Ryjunea 0.1 mg/ml eye drops, solution

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

1 ml eye drops contains 0.1 mg of atropine sulfate.
One drop (about 0.03 ml) contains approximately 3 mcg of atropine sulfate.

Excipient with known effect

1 ml of Ryjunea 0.1 mg/ml solution contains 0.1 mg benzalkonium chloride.

For the full list of excipients, see section 6.1.

3. PHARMACEUTICAL FORM

Eye drops, solution (eye drops)

The solution is a clear and colourless liquid with a pH of 5.4 and an osmolality of 280 mOsm/kg.

4. CLINICAL PARTICULARS

4.1 Therapeutic indications

Ryjunea is indicated for slowing the progression of myopia in paediatric patients. Treatment may be initiated in children aged 3-14 years with a progression rate of 0.5 D or more per year and a severity of -0.5 D to -6.0 D.

4.2 Posology and method of administration

Ryjunea should only be initiated by an ophthalmologist or a healthcare professional qualified in ophthalmology.

Posology

The recommended dose of Ryjunea 0.1 mg/ml is one drop into each eye once daily.

Administration at bedtime is recommended.

Treatment should be assessed during regular clinical evaluation. Consider tapering and stopping treatment once myopia is stabilised (less than 0.5 D progression over 2 years) during adolescence. Continue monitoring for one year after cessation of treatment. Consider restarting treatment in case of subsequent myopia progression (0.5 D or worse per year, see section 4.4).

Missed dose
If one dose is missed, treatment should continue with the next dose as normal.

Paediatric population

The safety and efficacy of Ryjunea in children aged less than 3 years has not been established. No data are available.

Method of administration

Ocular use.

It is recommended that the lachrymal sac be compressed at the medial canthus (punctal occlusion) for one minute, to reduce possible systemic absorption. This should be performed immediately following the instillation of each drop.

Contact lenses should be removed before instillation of the eye drops and may be reinserted after fifteen minutes (see section 4.4).

If more than one topical ophthalmic medicinal product is being used, the medicinal products must be administered at least fifteen minutes apart. Eye ointments should be used last.

To maintain sterility, contact of the container with the eye or eyelids should be avoided.

4.3 Contraindications

Hypersensitivity to atropine sulfate or to any of the excipients listed in section 6.1.
Known hypersensitivity to other anticholinergics like ipratropium and tiotropium.
Patients with primary glaucoma or angle-closure glaucoma.

4.4 Special warnings and precautions for use

Photophobia and accommodative dysfunction

After using atropine sulfate, accommodative dysfunction and increased sensitivity to bright light can be expected due to mydriasis. The effect could last up to 14 days. Photochromatic lenses may be used as needed to reduce discomfort due to photophobia.

Rebound myopia progression upon discontinuation

Discontinuation of atropine sulfate eye drops may lead to rebound myopia progression. Continue monitoring for one year after cessation of treatment. Consider restarting treatment in case of rebound myopia progression (0.5 D or worse per year, see section 4.2).

Synechiae

Atropine sulfate may increase the risk of adherence of the iris and lens.

Cataract

Depending on the type and opacity of the cataract, visual acuity and refraction may not be accurately assessed.

Amblyopia and strabismus

Atropine sulfate can cause blurred vision which may exacerbate these conditions.

Progressive syndromic myopia of childhood

Before starting treatment with atropine, it is important to rule out progressive syndromic myopia of childhood, such as glaucoma, retinitis pigmentosa, congenital hemeralopia, and myelinated nerve fiber syndrome. These conditions do not evolve the same way as typical progressive myopia and should not be treated with atropine.

Patients with cardiac disorders

Atropine sulfate must be used and dosed with special caution in patients with tachycardia, heart failure, coronary stenosis and hypertension. Patients who have suffered a recent heart attack may experience tachycardic arrhythmias up to ventricular fibrillation while being administered atropine sulfate.

Risk of hyperthermia

As the capability for temperature regulation may be affected by inhibition of sweating, atropine sulfate must be used with caution in high ambient temperature and in patients with fever due to the risk of hyperthermia.

Spastic paralysis

An increased susceptibility to atropine has been reported in children with spastic paralysis; therefore Atropine sulfate must be used with special caution in these patients.

Down's syndrome

An increased susceptibility to atropine has been reported in children with Down's syndrome; therefore, atropine sulfate must be used with special caution in these patients.

Excipients

This medicinal product contains 0.1 mg benzalkonium chloride in each ml. Benzalkonium chloride has been reported to cause eye irritation, symptoms of dry eyes and may affect the tear film and corneal surface. This medicinal product should be used with caution in dry eye patients and in patients where the cornea may be compromised. Such patients should be monitored in case of prolonged use.

Contact lenses should be removed prior to administration and may be reinserted 15 minutes after administration. Benzalkonium chloride is known to be absorbed by soft contact lenses and may change the colour of contact lenses.

4.5 Interaction with other medicinal products and other forms of interaction

No interaction studies have been performed.

Sympathomimetics

The possibility for systemic drug-drug interactions is considered low with atropine sulfate eye drops but it should be used with precaution when used in combination sympathomimetics like dobutamine, dopamine, norepinephrine, epinephrine or isoproterenol because mydriasis may be enhanced (see section 4.4).

Anticholinergics

If significant systemic absorption of ophthalmic atropine sulfate occurs, concurrent use of other anticholinergics or medicinal products with anticholinergic activity like antihistamines, phenothiazines, tricyclic and tetracyclic antidepressants, amantadine, quinidine, disopyramide and metoclopramide may result in potentiated anticholinergic effects.

Carbachol, physostigmine or pilocarpine

Concurrent use with atropine sulfate may interfere with the antiglaucoma action of carbachol, physostigmine or pilocarpine (see also section 4.3). Also, concurrent use may counteract the mydriatic effect of atropine sulfate.

Antimyasthenic medicinal products like pyridostigmine and neostigmine, potassium citrate, potassium supplements

If significant systemic absorption of ophthalmic atropine sulfate occurs, concurrent use may increase the chance of toxicity and/or side effects like constipation, nausea and vomiting because of the anticholinergic induced slowing of gastrointestinal motility.

CNS depression-producing medical products

If significant absorption of systemic atropine sulfate occurs, concurrent use of medicinal products having CNS effects, such as antiemetic agents, phenothiazines, or barbiturates, may result in opisthotonos, convulsions, coma, and extrapyramidal symptoms.

4.6 Fertility, pregnancy and lactation

Pregnancy

The safety of this medicinal product for use in human pregnancy has not been established. Animal studies are insufficient with respect to reproductive toxicity. A moderate amount of data on pregnant women indicates no malformative or feto/neonatal toxicity of atropine sulfate.

Atropine sulfate rapidly crosses the placenta. Since atropine sulfate may be systemically absorbed after ocular administration, Ryjunea should only be used if absolutely necessary, especially during the last 3 months of pregnancy.

Breast-feeding

There is insufficient information on the effects of atropine sulfate in newborns/infants.
Atropine sulfate is excreted in human milk. A decision must be made whether to discontinue breast-feeding or to discontinue/abstain from Ryjunea therapy taking into account the benefit of breast-feeding for the child and the benefit of therapy for the woman.

Fertility

Animal studies do not indicate clinically-relevant effects with respect to male fertility (see section 5.3). Animal studies to evaluate effects on female fertility have not been conducted.

There are no data on the effects of atropine eye drops on human fertility.

4.7 Effects on ability to drive and use machines

Ryjunea has a moderate influence on the ability to ride bikes, drive or use machines. Instillation of Ryjunea, may induce temporary blurred vision or other visual disturbances (see section 4.8). Patients

should be advised not to ride bikes, drive or use machines until their vision has cleared. This effect may last up to 14 days after stopping treatment (see section 4.4).

4.8 Undesirable effects

Summary of the safety profile

The most common adverse reactions are photophobia (23.4%), eye irritation (9.9%) and blurred vision (7.8%).

Tabulated list of adverse reactions

Adverse reactions reported in a phase III clinical trial where 282 patients aged 3 to 18 years were exposed to Ryjunea 0.1mg/ml are tabulated below by system organ class and by frequency. Approximately 0.4% of patients using Ryjunea discontinued due to any adverse event in the 36-month study.

The frequencies are as follows: very common (≥1/10), common (≥1/100 to <1/10), uncommon (≥1/1 000 to <1/100), rare (≥1/10 000 to <1/1 000) very rare (<1/10 000), not known (cannot be estimated from the available data).

Table 1. Adverse reactions observed in clinical trial specific for Ryjunea 0.1 mg/ml

System organ class	Very common ≥1/10	Common ≥1/100 to <1/10	Uncommon ≥1/1 000 to <1/100
Nervous system disorders		Headache	
Eye disorders	Photophobia	Vision blurred, Eye irritation, Eye pain, Foreign body sensation in eyes, Mydriasis	Accommodation disorder, Conjunctival papillae, Punctate keratitis

Description of selected adverse reactions

Photophobia
Atropine sulfate causes photophobia by dilating the pupil and paralyzing the ciliary muscle, allowing excessive light to enter the eye and impairing its ability to adjust to bright light. Photophobia was the most commonly reported adverse reaction in clinical trials, typically presenting as mild to moderate in severity. Duration of the photophobia varied from 1 to 1 392 days (average 259 days) and usually occurred intermittently (see section 4.4).

Vision blurred
Mild or moderate blurred vision is associated with atropine sulfate (see sections 4.4 and 4.7). In approximately 69% of patients, it resolves by itself during treatment (range of duration 2 to 734 days, mean duration days 135).

Eye irritation
Signs and symptoms of eye irritation associated with atropine sulfate include also eye pruritus and ocular discomfort. These are mostly mild or moderate symptoms occurring intermittently. The duration of these reactions varied from 1 to 758 days in the clinical trial and were comparable in the vehicle group and in the atropine sulfate groups.

Reporting of suspected adverse reactions

Reporting suspected adverse reactions after authorisation of the medicinal product is important. It allows continued monitoring of the benefit/risk balance of the medicinal product. Healthcare professionals are asked to report any suspected adverse reactions via the national reporting system listed in Appendix V.

4.9 Overdose

Overdose is unlikely to occur after ocular administration.

Symptoms

Possible symptoms of overdose can be flushing and dryness of the skin, dilated pupils with photophobia, dry mouth and tongue accompanied by a burning sensation, difficulty in swallowing, tachycardia, rapid respiration, hyperpyrexia, nausea, vomiting, hypertension, rash and excitement. Symptoms of central nervous system (CNS) stimulation include restlessness, confusion, hallucinations, paranoid and psychotic reactions, incoordination, delirium and occasionally convulsions. In severe overdose, drowsiness, stupor and CNS depression may occur with coma, circulatory and respiratory failure and death.

Treatment

If overdose with atropine sulfate occurs, treatment should be symptomatic and supportive. In ocular overdose, eyes can be rinsed with water or sodium chloride 9 mg/ml (0.9 %) solution for injection. An adequate airway should be maintained. Diazepam may be administered to control excitement and convulsions, but the risk of CNS depression should be considered.

5. PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties

Pharmacotherapeutic group: Mydriatics and cycloplegics, Anticholinergics. ATC code: S01FA01

Mechanism of action

Atropine acts as a competitive and reversible antagonist at all muscarinic acetylcholine receptors. The mechanism through which atropine retards myopia progression is not fully understood but is thought to involve stimulation of scleral remodelling/strengthening that reduces axial length and vitreous chamber depth. Published literature provides evidence that the mechanism of action of atropine in myopia and in mydriatic/cycloplegic indications, is not identical.

Pharmacodynamic effects

Atropine sulfate induces mydriasis by inhibiting the contraction of the circular sphincter muscle of the iris, allowing the radial dilator muscle to contract and dilate the pupil. It also blocks cholinergic stimulation of the ciliary muscle, leading to cycloplegia by paralyzing the muscle responsible for accommodation.

Clinical efficacy and safety

The efficacy, safety and tolerability of Ryjunea 0.1 mg/ml has been evaluated in a pivotal phase III study.

The 48-month double masked vehicle controlled phase III clinical trial (STAR study), enrolled 852 children aged 3 to 14 years inclusive, with myopia of -0.50 D to -6.0 D, who were randomised to receive Ryjunea 0.1 mg/ml, 0.3 mg/ml or placebo (vehicle). At Month 36, patients, initially randomised to Ryjunea 0.1 mg/ml or 0.3 mg/ml were randomly re-assigned in a double-masked manner to either continue with Ryjunea 0.1 mg/ml or 0.3 mg/ml or were assigned to vehicle. Participants initially randomised to vehicle were assigned to receive Ryjunea 0.3 mg/ml. Treatment compliance was greater than 97% in all treatment groups.

The Full Analysis Set (FAS) included 847 participants who received at least 1 dose of study drug. Randomisation was stratified according to age [3 to < 6 years (3.1%), 6 to < 9 (21.8%), 9 to < 12 (39.1%), and 12-14 (36%)] and baseline spherical equivalent (SE) [-0.50 D to -3.0 D (61.9%), >-3.0 D to -6.0 D (31.8%)] as measured by cycloplegic autorefraction.

Demographic characteristics were similar in all treatment groups. Overall, the mean age at baseline was 10.3 ± 2.44 years, ranging from 3 to 14 years. In all groups, there were more males (55.7%) than females (44.3%). Most participants were White (68.5%); Asian participants accounted for 17.5% of the FAS. Other baseline characteristics were similar in all treatment groups. The mean participants' baseline spherical equivalent (SE) was -2.69 ± 1.309 D and was similar between the treatment groups. Participants enrolled did not suffer from any medical condition that predisposes to degenerative myopia (eg, Marfan syndrome, Stickler syndrome) or a condition that may affect visual function or development (eg, diabetes mellitus, chromosome anomaly). Additionally, participants with amblyopia, strabismus, cataract, or primary open angle and angle closure glaucoma were excluded.

Efficacy

The primary endpoint was the difference in the mean annual progression rate (APR) of myopia through 24 months between treatment and vehicle groups in the FAS. For Ryjunea 0.1 mg/ml, a statistically significant difference of 0.132 D (95% CI: 0.061, 0.204) compared to vehicle was shown.

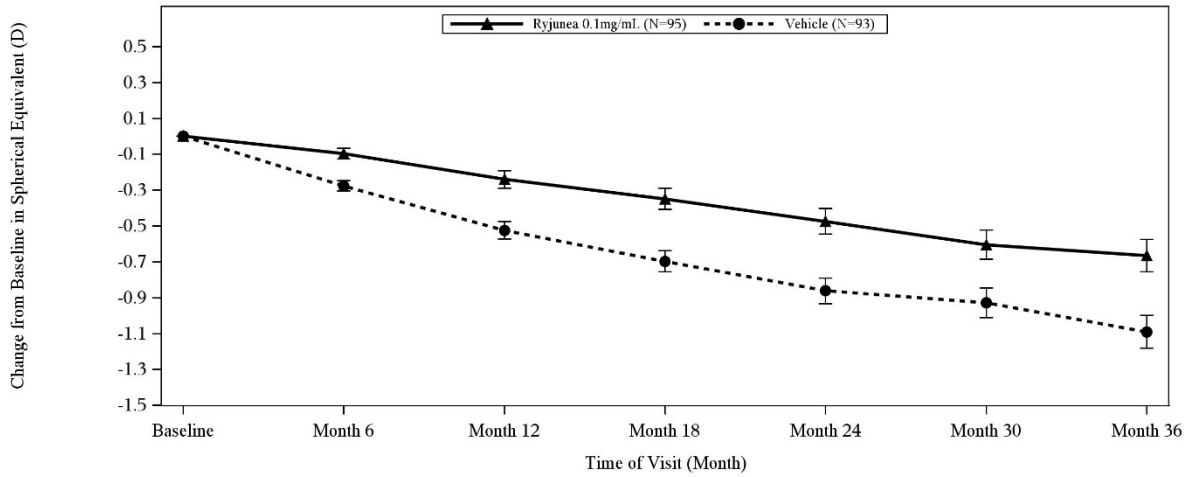
A higher treatment effect was observed in participants with progression rate of 0.5 D or more per year. In this pre-specified subgroup, a difference in mean APR of 0.207 D (95% CI: 0.112, 0.302) was observed for 0.1 mg/mL Ryjunea vs. vehicle at 24 months, and a difference in mean APR of 0.154 D (95% CI: 0.073, 0.236) was observed for 0.1 mg/mL Ryjunea vs. vehicle at 36 months. A difference in mean change from baseline spherical equivalent (SE) of 0.388 D (95% CI: 0.190, 0.585) was observed for Ryjunea 0.1 mg/ml compared to vehicle at 24 months, and a difference in mean change from baseline spherical equivalent of 0.425 D (95% CI 0.170, 0.681) was observed for Ryjunea 0.1 mg/mL compared to vehicle at 36 months (Table 2). Figure 1 shows the mean change from baseline in SE through 36 months between treatment and vehicle groups in patients with progression rate of 0.5 D or more per year.

Larger effect sizes were observed with younger ages.

Table 2: STAR-trial: Change from baseline in spherical equivalent (D) through month 36 in patients with progression rate of 0.5 D or more per year

	Vehicle (n=93)	**Ryjunea 0.1 mg/ml (n=95)**
Baseline to month 24	-0.862 (-1.00, -0.72)	-0.474 (-0.61, -0.33)
Difference to vehicle		0.388 (0.190, 0.585)
Baseline to month 36	-1.091 (-1.27, -0.91)	-0.665 (-0.85, -0.49)
Difference to vehicle		0.425 (0.170, 0.681)

Figure 1: STAR-trial: Mean change from baseline in spherical equivalent (D) through month 36 in patients with progression rate of 0.5 D or more per year



Number of Subjects							
Ryjunea 0.1mg/mL	95	82	85	85	82	76	72
Vehicle	93	85	87	81	76	70	67

In a subset of 44 participants per treatment group, there was no statistically significant improvement in axial length for Ryjunea 0.1 mg/mL compared to vehicle at month 24.

5.2 Pharmacokinetic properties

No pharmacokinetic study in paediatric patients has been performed with Ryjunea. PK data are only available for adults who received a higher dose of atropine sulfate.

Absorption

In a study of healthy subjects, after topical ocular administration of 30 µL atropine sulfate ophthalmic solution, 10 mg/ml the mean (± SD) systemic bioavailability of l-hyoscyamine was reported to be approximately 64 ± 29 %, (range 19% to 95%) as compared to intravenous administration of atropine sulfate. The mean (± SD) time to maximum plasma concentration (T_{max}) was approximately 28 ± 27 minutes (range 3 to 60 minutes), and the mean (± SD) peak plasma concentration (C_{max}) of l-hyoscyamine was 288 ± 73 pg/ml.

In a separate study of patients undergoing ocular surgery, after topical ocular administration of 40 µL of atropine sulfate ophthalmic solution, 10 mg/ml, the mean (± SD) plasma C_{max} of l-hyoscyamine was 860 ± 402 pg/ml.

Distribution

Atropine is distributed widely throughout the body and crosses the blood brain barrier. Up to 50% of the dose is protein bound.

Biotransformation

Atropine is metabolised in the liver by oxidation and conjugation to give inactive metabolites.

Elimination

The elimination half-life is about 2 to 5 hours. About 50% of the dose is excreted within 4 hours and 90% in 24 hours in the urine, about 30 to 50% as unchanged drug.

5.3 Preclinical safety data

Minimal focal hyperkeratosis of the eyelid was observed at necropsy in three of four rabbits given atropine sulfate 0.1 mg/ml eye drops three times daily.

Based of literature data, there is no evidence of mutagenic or tumorigenic effects of atropine sulfate.

Atropine sulfate administered orally reduced fertility in male rats at exposures considered sufficiently in excess of the maximum human exposure indicating little relevance to clinical use.

6. PHARMACEUTICAL PARTICULARS

6.1 List of excipients

Benzalkonium chloride
Citric acid (E330)
Sodium citrate (E331)
Sodium chloride
Sodium hydroxide (E524) / hydrochloric acid (E507) (for pH adjustment)
Deuterium oxide

6.2 Incompatibilities

Not applicable.

6.3 Shelf life

Unopened: 3 years.
After first opening: 4 weeks

6.4 Special precautions for storage

This medicinal product does not require any special storage conditions.

6.5 Nature and contents of container

White low-density polyethylene (LDPE) 5 ml bottles with white LDPE tips and red high-density polyethylene (HDPE) screw caps with a protective tamper-evident ring.

Each multi-dose bottle contains 2.5 ml Ryjunea 0.1 mg/ml.
Pack sizes: 1 or 3 multi-dose bottles.

Not all pack sizes may be marketed.

6.6 Special precautions for disposal and other handling

Any unused medicinal product or waste material should be disposed of in accordance with local requirements.

7. MARKETING AUTHORISATION HOLDER

Santen Oy
Niittyhaankatu 20
33720 Tampere
Finland

8. MARKETING AUTHORISATION NUMBER(S)

EU/1/25/1920/001
EU/1/25/1920/002

9. DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION

Date of first authorisation: 02 June 2025

10. DATE OF REVISION OF THE TEXT

Detailed information on this medicinal product is available on the website of the European Medicines Agency https://www.ema.europa.eu

ANNEX II

A. MANUFACTURER RESPONSIBLE FOR BATCH RELEASE

B. CONDITIONS OR RESTRICTIONS REGARDING SUPPLY AND USE

C. OTHER CONDITIONS AND REQUIREMENTS OF THE MARKETING AUTHORISATION

D. CONDITIONS OR RESTRICTIONS WITH REGARD TO THE SAFE AND EFFECTIVE USE OF THE MEDICINAL PRODUCT

A. MANUFACTURER RESPONSIBLE FOR BATCH RELEASE

Name and address of the manufacturer responsible for batch release

Santen Oy
Kelloportinkatu 1
33100 Tampere
Finland

B. CONDITIONS OR RESTRICTIONS REGARDING SUPPLY AND USE

Medicinal product subject to restricted medical prescription (see Annex I: Summary of Product Characteristics, section 4.2).

C. OTHER CONDITIONS AND REQUIREMENTS OF THE MARKETING AUTHORISATION

- **Periodic safety update reports (PSURs)**

The requirements for submission of PSURs for this medicinal product are set out in the list of Union reference dates (EURD list) provided for under Article 107c(7) of Directive 2001/83/EC and any subsequent updates published on the European medicines web-portal.

D. CONDITIONS OR RESTRICTIONS WITH REGARD TO THE SAFE AND EFFECTIVE USE OF THE MEDICINAL PRODUCT

- **Risk management plan (RMP)**

The marketing authorisation holder (MAH) shall perform the required pharmacovigilance activities and interventions detailed in the agreed RMP presented in Module 1.8.2 of the marketing authorisation and any agreed subsequent updates of the RMP.

An updated RMP should be submitted:

- At the request of the European Medicines Agency;
- Whenever the risk management system is modified, especially as the result of new information being received that may lead to a significant change to the benefit/risk profile or as the result of an important (pharmacovigilance or risk minimisation) milestone being reached.

- **Obligation to conduct post-authorisation measures**

The MAH shall complete, within the stated timeframe, the below measures:

Description	Due date
Post-authorisation efficacy study (PAES): In order to further characterise the efficacy and safety of Ryjunea and the rebound effects and progression of myopia after treatment cessation, the MAH should submit the 48 months follow-up results from the study SYD-101-001.	Final CSR: 30.06.2026

ANNEX III

LABELLING AND PACKAGE LEAFLET

A. LABELLING

PARTICULARS TO APPEAR ON THE OUTER PACKAGING

OUTER CARTON BOX

1. NAME OF THE MEDICINAL PRODUCT

Ryjunea 0.1 mg/ml eye drops, solution
atropine sulfate

2. STATEMENT OF ACTIVE SUBSTANCE

1 ml eye drops contains 0.1 mg of atropine sulfate
One drop (about 0.03 ml) contains approximately 3 mcg of atropine sulfate

3. LIST OF EXCIPIENTS

Benzalkonium chloride, citric acid (E330), sodium citrate (E331), sodium chloride, sodium hydroxide (E524) / hydrochloric acid (E507), deuterium oxide. See leaflet for further information.

4. PHARMACEUTICAL FORM AND CONTENTS

Eye drops, solution

1 × 2.5 ml
3 × 2.5 ml

5. METHOD AND ROUTE(S) OF ADMINISTRATION

Read the package leaflet before use.
Ocular use
Remove contact lenses before use.

6. SPECIAL WARNING THAT THE MEDICINAL PRODUCT MUST BE STORED OUT OF THE SIGHT AND REACH OF CHILDREN

Keep out of the sight and reach of children.

7. OTHER SPECIAL WARNING(S), IF NECESSARY

8. EXPIRY DATE

EXP
Discard 4 weeks after first opening.

For the 1-bottle pack size:
Open date: _____

For the 3-bottle pack size:
Open date (1): _____
Open date (2): _____
Open date (3): _____

9. SPECIAL STORAGE CONDITIONS

10. SPECIAL PRECAUTIONS FOR DISPOSAL OF UNUSED MEDICINAL PRODUCTS OR WASTE MATERIALS DERIVED FROM SUCH MEDICINAL PRODUCTS, IF APPROPRIATE

11. NAME AND ADDRESS OF THE MARKETING AUTHORISATION HOLDER

Santen Oy
Niittyhaankatu 20
33720 Tampere
Finland

12. MARKETING AUTHORISATION NUMBER(S)

EU/1/25/1920/001 1 bottle
EU/1/25/1920/002 3 bottles

13. BATCH NUMBER

Lot

14. GENERAL CLASSIFICATION FOR SUPPLY

15. INSTRUCTIONS ON USE

16. INFORMATION IN BRAILLE

Ryjunea 0.1 mg/ml

17. UNIQUE IDENTIFIER – 2D BARCODE

2D barcode carrying the unique identifier included.

18. UNIQUE IDENTIFIER - HUMAN READABLE DATA

PC

SN
NN

MINIMUM PARTICULARS TO APPEAR ON SMALL IMMEDIATE PACKAGING UNITS

BOTTLE LABEL

1. NAME OF THE MEDICINAL PRODUCT AND ROUTE(S) OF ADMINISTRATION

Ryjunea 0.1 mg/ml eye drops
atropine sulfate
ocular use

2. METHOD OF ADMINISTRATION

3. EXPIRY DATE

EXP

4. BATCH NUMBER

Lot

5. CONTENTS BY WEIGHT, BY VOLUME OR BY UNIT

2.5 ml

6. OTHER

B. PACKAGE LEAFLET

Package leaflet: Information for the user

Ryjunea 0.1 mg/ml eye drops, solution
atropine sulfate

Read all of this leaflet carefully before you or your child start(s) using this medicine because it contains important information for you.
- Keep this leaflet. You may need to read it again.
- If you have any further questions, ask your doctor or pharmacist.
- This medicine has been prescribed for you only. Do not pass it on to others. It may harm them, even if their signs of illness are the same as yours.
- If you get any side effects, talk to your doctor or pharmacist. This includes any possible side effects not listed in this leaflet. See section 4.

What is in this leaflet

1. What Ryjunea is and what it is used for
2. What you need to know before you use Ryjunea
3. How to use Ryjunea
4. Possible side effects
5. How to store Ryjunea
6. Contents of the pack and other information

1. What Ryjunea is and what it is used for

Ryjunea eye drops contain the active substance atropine sulfate.

It is used to slow worsening of myopia (nearsightedness) in children aged 3 to 14, whose myopia is between -0.5 and -6 diopters (a measurement of the capacity of the eye to focus) and their progression rate is 0.5 diopters per year or more at the beginning of the treatment with Ryjunea.

The benefit of the use of atropine sulfate eye drops in children is to maintain a better eye sight and to reduce the risk of future complications.

2. What you need to know before you use Ryjunea

Do not use Ryjunea
- if you are allergic to atropine sulfate or any of the other ingredients of this medicine (listed in section 6).
- if you are allergic to other so-called anticholinergics (substances that block the action of the neurotransmitter acetylcholine), like antihistamines, some antidepressants, amantadine, quinidine, disopyramide and metoclopramide.
- if you have primary or angle-closure glaucoma (damage to the nerve in the eye caused by high pressure inside the eye).

Warnings and precautions
You or your child may experience photophobia (increased sensitivity of the eyes to bright light) and accomodative dysfunction (blurred vision due to difficulty focussing the eyes) when using Ryjunea. These effects can last up to 14 days. If your eyes are more sensitive to light, you are advised to wear sunglassesto reduce discomfort.

Stopping treatment may cause your myopia to worsen again (see section 3 “If you stop using Ryjunea”). After you stop taking this medicine, you should continue your eye checks for one year. Talk to your doctor or the doctor treating your child in case your eye sight worsens (rebound).

Using this medicine may increase the risk of synechiae (abnormal adhesions of the iris) where the coloured part of the eye sticks to the tissue around it.

Ryjunea can cause blurred vision which may make seeing difficult in patients with clouding of the lens (cataract), lazy eye (amblyopia) and eye misalignment (strabismus).

Talk to your doctor or pharmacist before using Ryjunea, if the following applies to you or your child:

- if you have progressive syndromic nearsightedness of childhood, such as damage to the nerve in the eye usually caused by high pressure in the eye (glaucoma), progressive vision loss (retinitis pigmentosa), day blindness from birth (congenital hemeralopia), and disorder with nerve fiber of the eyes (myelinated nerve fiber syndrome).
- have heart problems such as tachycardia (rapid heartbeat), heart failure (when the heart does not pump blood as well as it should), coronary stenosis (narrowing of the blood vessels that supply the heart muscle), or hypertension (high blood pressure). Patients who have suffered a recent heart attack may experience potentially life-threatening abnormalities in heart rhythm when using this medicine.
- may have the capability for temperature regulation affected by inhibition of sweating, as atropine must be used with caution in high temperatures, in patients with fever due to the risk of high body temperature.
- have spastic paralysis (a muscle condition of the legs).
- have Down's syndrome.

Children
Ryjunea is not recommended in children below 3 years. It is not known if it is safe or effective in this age group.

Other medicines and Ryjunea
Ryjunea may interact with other medicines. Before you or your child take Ryjunea, tell your doctor or pharmacist if you are using, have recently used or might use any other medicines, including medicines obtained without prescription. Tell your doctor especially:

- if you are taking anticholinergics like antihistamines, phenothiazines, tricyclic and tetracyclic antidepressants, amantadine, quinidine, disopyramide, metoclopramide.
- if you are taking medicines containing carbachol, pilocarpin or physostigmin to lower your eye pressure.
- if you are taking sympathomimetic medicines like dobutamine, dopamine, norepinephrine, epinephrine or isoproterenol.
- if you are taking medicines that prevent muscle weakness (antimyasthenics) like pyridostigmine and neostigmine, potassium citrate or potassium supplements.
- if you are taking brain or spinal cord (central nervous system) slowing medicines.

If you are not sure if the above applies to you or your child, ask your doctor.

Pregnancy and breast-feeding
If you are pregnant or breast-feeding, think you may be pregnant or are planning to have a baby, ask your doctor or pharmacist for advice before using this medicine.

During pregnancy, especially during the last 3 months, Ryjunea should only be used if your doctor considers that the use of this medicine is absolutely necessary for you.

It is not recommended to use this medicine during breast-feeding because Ryjunea is passed into breast milk**.**

Driving and using machines

Ryjunea has a moderate influence on the ability to drive, ride bikes or scooters, or use machines because this medicine may lead to abnormal or blurred vision (see section 4 ‘Possible side effects”). Do not drive, ride bikes or scooters or use machines until your vision has cleared. This effect may last up to 14 days after stopping treatment.

Ryjunea contains benzalkonium chloride
This medicine contains 0.1 mg benzalkonium chloride in each ml. Benzalkonium chloride may be absorbed by soft contact lenses and may change the colour of the contact lenses. You should remove contact lenses before using this medicine and put them back 15 minutes afterwards.

Benzalkonium chloride may also cause eye irritation, especially if you have dry eyes or disorders of the cornea (the clear layer at the front of the eye). If you feel abnormal eye sensation, stinging or pain in the eye after using this medicine, talk to your doctor.

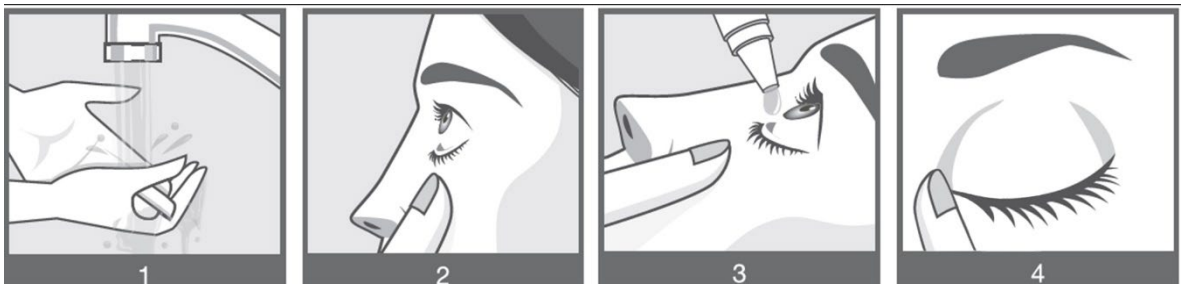
3. How to use Ryjunea

Always use this medicine exactly as your doctor has told you. Check with your doctor or pharmacist if you are not sure.

The recommended dose is one drop of Ryjunea 0.1 mg/ml in each eye daily. It is recommended to use right before bed time because this can help reduce the impact of side effects like blurred vision or abnormal sensitivity of the eyes to light (see section 4 “Possible side effects”). Your doctor will advise you how long to apply the drops.

If you are using other eye drops, wait at least 15 minutes after using them and then use Ryjunea. If you use contact lenses, you should remove them before use (see section 2 “Ryjunea contains benzalkonium chloride”). If you are using an eye ointment, it should be used after using Ryjunea. This helps Ryjunea to get into your eye and to start working.

How to use



- Wash your hands before you start (picture 1).
- Open the bottle. Remove the loose plastic ring from the cap when the bottle is first opened**.** Take special care that the tip of the dropper bottle does not touch your eye, the skin around your eye or your fingers.
- Do not use if the tamper evident ring is broken or you notice visible signs of deterioration.
- Twist off the bottle cap, and lie the cap on a clean surface on its side. Continue to hold the bottle, ensuring that the tip doesn’t come into contact with anything.
- Hold the bottle, pointing down, between your thumb and fingers.
- Pull down your lower eyelid with a clean finger to form a ‘pocket’ between the eyelid and your eye (picture 2). The drop will go in here.
- Tilt your head back.
- Bring the dropper tip close to the eye. Do this in front of a mirror if it helps.
- Do not touch your eye, eyelid, surrounding areas or other surfaces with the dropper tip. It could contaminate the eye drops.
- Gently squeeze the bottle to release one drop of Ryjunea into your eye (picture 3).

- Only put one drop into your eye. If a drop misses your eye, try again.
- Press a finger against the corner of the eye by the nose. Hold for 1 minute whilst keeping the eye closed (picture 4). A small duct that drains tears away from your eye and into your nose is located here. By pressing at this point, you close down the opening of this drainage duct. This helps to stop Ryjunea getting into the rest of the body.
- You need to use the drops in both eyes, repeat the steps for your other eye while you have the bottle open.
- Put back the bottle cap to close the bottle.

If you use more Ryjunea than you should
Rinse your eye with warm water. Do not put in any more drops until it is time for your next regular dose.

If you forget to use Ryjunea
If you forget to use this medicine, skip the dose and use the next dose as you normally would. Do not take a double dose to make up for a forgotten dose.

If you stop using Ryjunea
Do not stop using Ryjunea without first speaking to your doctor or the doctor treating your child. Stopping of this medicine may lead to a worsening of your myopia (rebound). After you stop taking this medicine, you should continue your eye checks for one year. Talk to your doctor or the doctor treating your child in case your eye sight worsens (rebound).

If you have any further questions on the use of this medicine, ask your doctor or pharmacist.

4. Possible side effects

Like all medicines, this medicine can cause side effects, although not everybody gets them.

The following side effects have been observed with Ryjunea:

- **Very common** (may affect more than 1 in 10 people)
- abnormal sensitivity of the eyes to light (photophobia)

- **Common** (may affect up to 1 in 10 people)
- blurred vision
- eye irritation
- dilation of the pupil (mydriasis)
- eye pain
- feeling there is something in your eye (foreign body sensation)
- headache

- **Uncommon** (may affect up to 1 in 100 people)
- difficulty focusing vision (accommodation disorder)
- spots of inflammation in the cornea (punctate keratitis)
- papilla in the membrane that lines the white of the eye and the inside of the eyelid (conjunctival papillae)

Reporting of side effects
If you get any side effects, talk to your doctor or pharmacist. This includes any possible side effects not listed in this leaflet. You can also report side effects directly via the national reporting system listed in Appendix V. By reporting side effects, you can help provide more information on the safety of this medicine.

5. How to store Ryjunea

Keep this medicine out of the sight and reach of children.

Do not use this medicine after the expiry date which is stated on the bottle label and carton after "EXP". The expiry date refers to the last day of that month.

This medicine does not require any special storage conditions.

Throw away the bottle 4 weeks after first opening to prevent infections and use a new bottle.

Do not use this medicine if you notice that the plastic ring around the cap and neck is missing or broken before you start a new bottle.

Do not throw away any medicines via wastewater or household waste. Ask your pharmacist how to dispose of medicines you no longer use. These measures will help to protect the environment.

6. Contents of the pack and other information

What Ryjunea contains
- The active substance is atropine sulfate. Each ml of solution contains 0.1 mg of atropine sulfate.
- The other ingredients are benzalkonium chloride, citric acid (E330), sodium citrate (E331), sodium chloride, sodium hydroxide (E524)/hydrochloric acid (E507) (for pH adjustment), deuterium oxide. See section 2 "Ryjunea contains benzalkonium chloride".

What Ryjunea looks like and contents of the pack
Ryjunea eye drops, solution (eye drops) is a clear, colourless liquid in a plastic multidose bottle.

Each bottle contains 2.5 ml of the medicine and each pack contains 1 or 3 bottles with a screw-cap.

Not all pack sizes may be marketed.

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33720 Tampere, Finland

Manufacturer
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Other sources of information

Detailed information on this medicine is available on the European Medicines Agency web site: https://www.ema.europa.eu