LUCENTIS®* (ranibizumab) pre-filled syringe preparation guidelines

**Please refer to the approved LUCENTIS® prescribing information.*

Aseptic technique should be observed during tray assembly, anesthetic preparation, drug preparation and administration. Ranibizumab must be administered by a qualified ophthalmologist experienced in administering intravitreal injections. In addition to the procedures outlined below, intravitreal injection guidelines of your specific clinic should be followed.

Notes

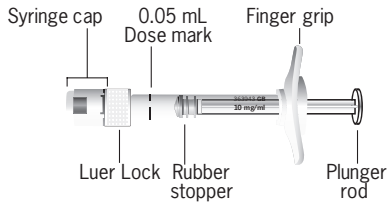
- Read all the instructions carefully before using the pre-filled syringe
- The pre-filled syringe is for single use only. The pre-filled syringe is sterile. Do not use the product if the packaging is damaged
- The opening of the sealed tray and all subsequent steps should be done under aseptic conditions
- **Note: the dose must be set to 0.05 mL**

Before starting

- Make sure that the pack contains a sterile pre-filled syringe in a sealed tray
- Peel the lid off the syringe tray and, using aseptic technique, carefully remove the syringe

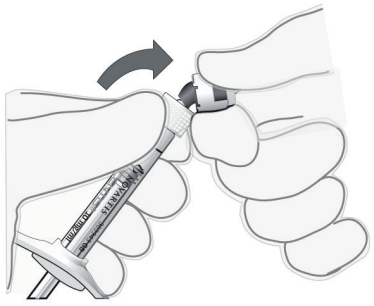
1. Check syringe

Only proceed if the pre-filled syringe cap is not detached from the Luer Lock, the syringe is not damaged, and the solution looks clear, colorless to pale yellow and does not contain any particulates. Otherwise, discard the pre-filled syringe and use a new one.



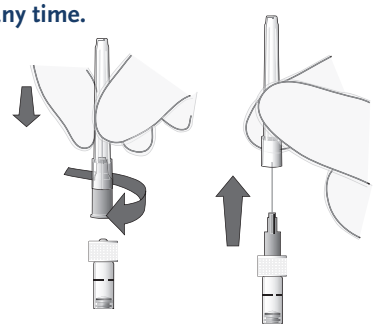
2. Remove syringe cap

Snap off (do not turn or twist) and dispose of the syringe cap.



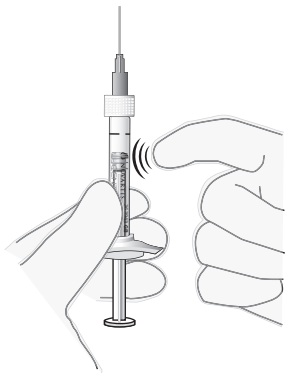
3. Attach needle

Attach a 30-gauge × ½-inch sterile injection needle firmly onto the syringe by screwing it tightly onto the Luer Lock. Carefully remove needle cap by pulling straight off.
Note: do not wipe the needle at any time.



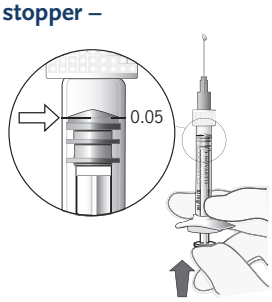
4. Dislodge air bubbles

Hold syringe upright. If there are any air bubbles, gently tap the syringe with your finger until the bubbles rise to the top.



5. Set dose

Hold the syringe at eye level and carefully push the plunger until the **edge below the dome of the rubber stopper** is aligned with the dose mark. This will expel the air and excess solution and set the dose to 0.05 mL.
Note: the plunger rod is not attached to the rubber stopper – this is to prevent air being drawn into the syringe.



For intravitreal injection guidelines, please see overleaf

NOVARTIS

LUCENTIS® RANIBIZUMAB

LUC PIC1 08/17 MT

September 2017

LUCENTIS®* (ranibizumab) intravitreal injection guidelines[1]

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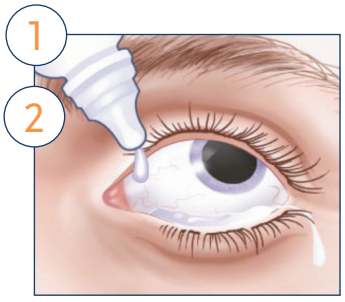
Aseptic technique should be observed during tray assembly, anesthetic preparation, drug preparation and administration. Ranibizumab must be administered by a qualified ophthalmologist experienced in administering intravitreal injections. In addition to the procedures outlined below, intravitreal injection guidelines of your specific clinic should be followed.

Injection supplies

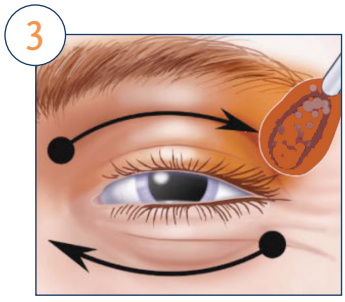
Before starting, aseptically assemble the following supplies:

- Sterile surgical gloves
- 4 x 4 sterile pads
- Pupillary dilation agent
- Povidone iodine solution 10%
- Povidone iodine eye drops 5%
- Sterile eyelid speculum
- Sterile ophthalmic drape
- Sterile caliper

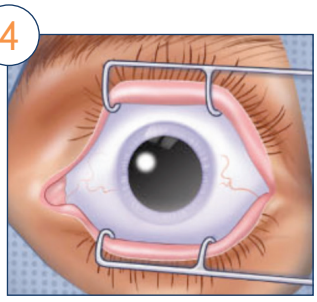
Injection procedures



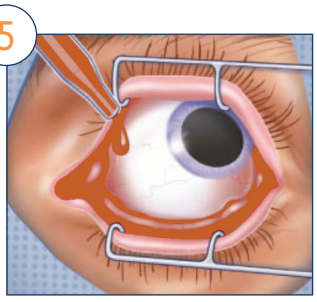
1. Dilate the pupil.
2. Apply topical anesthesia.



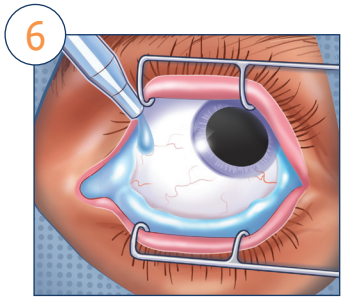
3. Apply 10% povidone iodine solution to periocular skin, lids, and eyelashes, and place sterile drape over eye.



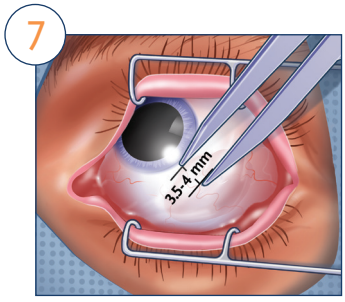
4. Apply sterile lid speculum.



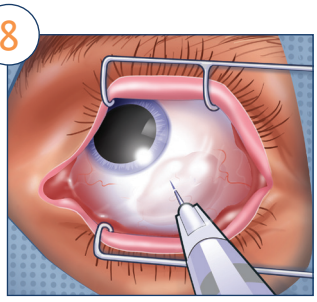
5. Instill 5% povidone iodine ophthalmic solution, and wait for 90 seconds.



6. Rinse the eye with ophthalmic saline solution.



7. Direct the patient to look away from the injection site. Mark an injection site at an area 3.5 mm to 4.0 mm posterior to the limbus, avoiding the horizontal meridian.



8. The injection needle should be inserted aiming towards the center of the globe. Slowly deliver the injection volume, then remove the needle slowly.
   - Rotate the scleral site for subsequent intravitreal injections so that the same site is not injected repeatedly.

Note: prophylactic topical antibiotics should be used according to local clinical practice

Post-injection procedures

- After injection, do not recap the needle or detach it from the syringe
- Dispose of the used syringe together with the needle in a sharps disposal container or in accordance with local requirements
- Evaluate light perception, indirect ophthalmoscope findings, and intraocular pressure immediately post-injection
- Instruct patient to report immediately any signs of inflammation or infection, such as eye pain or discomfort, worsening eye redness, sensitivity to light, vitreous floaters, or vision changes
- Monitor patient during the week following the injection to permit early treatment if an infection occurs

Reference: 1. Aiello LP, *et al. Retina*. 2004; 24(5 Suppl): S3-S19.

Lucentis® 10mg/ml solution for injection in pre-filled syringe

PRESENTATION: One ml contains 10mg ranibizumab. One pre-filled syringe contains 0.165ml equivalent to 1.65mg ranibizumab.

INDICATIONS: For the treatments of: neovascular (wet) age-related macular degeneration (AMD), visual impairment due to choroidal neovascularisation (CNV), visual impairment due to diabetic macular oedema (DME) and visual impairment due to macular oedema secondary to retinal vein occlusion (branch RVO or central RVO).

DOSAGE: Lucentis must be administered by a qualified ophthalmologist experienced in intravitreal injections. The recommended dose for Lucentis is 0.5 mg given as a single intravitreal injection. This corresponds to an injection volume of 0.05 ml. The interval between two doses injected into the same eye should be at least four weeks. Treatment is initiated with one injection per month until maximum visual acuity is achieved and/or there are no signs of disease activity. Thereafter, monitoring and treatment intervals should be determined by the physician and should be based on disease activity, as assessed by visual acuity and/or anatomical parameters. Monitoring may include clinical examination, functional testing, or imaging techniques. While applying the treat-and-extend regimen, the treatment interval should be extended by 2 weeks for wAMD and by 1 month for DME. Treatment intervals may also be gradually extended for RVO. Treatment for CNV should be determined individually per patient depending on disease activity. *Special populations -Hepatic impairment:* No special considerations. *Renal impairment:* Dosage adjustment is not needed. *Elderly:* Dose adjustment is not required, limited experience in elderly with DME older than 75 years. *Paediatric population:* The safety and efficacy of Lucentis in patients below 18 years of age have not been established.

CONTRAINDICATIONS: Hypersensitivity to the active substance or the excipients, in patients with active or suspected ocular or periocular infection and in patients with active severe intraocular inflammation.

WARNINGS/PRECAUTIONS: *Intravitreal injection-related reactions*: Intravitreous injections have been associated with endophthalmitis, intraocular inflammation, rhegmatogenous retinal detachment, retinal tear and iatrogenic traumatic cataract. Therefore proper aseptic injection techniques must be used when administering Lucentis. *Intraocular pressure (IOP) increases:* Monitor and manage appropriately the intraocular pressure and optic nerve head perfusion. Inform patients to report signs of IOP such as eye pain, worsening eye redness, blurred vision and increased light sensitivity. *Immunogenicity:* There is a potential for immunogenicity with Lucentis. Since there is a potential for an increased systemic exposure in subjects with DME, an increased risk for developing hypersensitivity in this patient population cannot be excluded. *Concomitant use of other anti-VEGF (vascular endothelial growth factor):* Lucentis should not be administered concurrently with other anti-VEGF medicinal products (systemic or ocular). *Withholding Lucentis:* The dose should be withheld and treatment should not be resumed earlier than the next scheduled treatment in the event of: ●a decrease in best-corrected visual acuity (BCVA) of ≥30 letters compared with the last assessment of visual acuity; ● an intraocular pressure of ≥30 mmHg; ● a retinal break; ● a subretinal haemorrhage involving the centre of the fovea, or, if the size of the haemorrhage is ≥50%, of the total lesion area; ● performed or planned intraocular surgery within the previous or next 28 days. *Retinal pigment epithelial tear:* Caution should be used in patients with risk factors for retinal pigment epithelial tears. *Rhegmatogenous retinal detachment or macular holes:* Treatment should be discontinued in subjects with rhegmatogenous retinal detachment or stage 3 or 4 macular holes. *Systemic effects following intravitreal use:* Use caution when treating patients with prior history of stroke or transient ischaemic attacks. *Women of childbearing potential/contraception in females:* Women of childbearing potential should use effective contraception during treatment. *Pregnancy:* It is recommended to wait at least 3 months after the last dose of ranibizumab before conceiving a child. *Breast-feeding:* Not recommended. *Effects on ability to drive and use machines:* Patients who experience temporary visual disturbances must not drive or use machines until these subside.

INTERACTIONS: No formal interaction studies have been performed. *Lucentis and laser photocoagulation in DME and in macular oedema secondary to BRVO:* When given on the same day, Lucentis should be administered at least 30 minutes after laser photocoagulation. Lucentis can be administered in patients who have received previous laser photocoagulation. *Lucentis and verteporfin photodynamic therapy in CNV secondary to PM:* No experience of concomitant administration.

ADVERSE REACTIONS: *Very common:* Nasopharyngitis, headache, vitritis, vitreous detachment, retinal haemorrhage, visual disturbance, eye pain, vitreous floaters, conjunctival haemorrhage, eye irritation, foreign body sensation in eyes, lacrimation increased, blepharitis, dry eye, ocular hyperaemia, eye pruritus, arthralgia, intraocular pressure increased. *Common:* Urinary tract infection, anaemia, hypersensitivity, anxiety, retinal degeneration, retinal disorder, retinal detachment, retinal tear, detachment of the retinal pigment epithelium, retinal pigment epithelium tear, visual acuity reduced, vitreous haemorrhage, vitreous disorder, uveitis, iritis, iridocyclitis, cataract, cataract subcapsular, posterior capsule opacification, punctuate keratitis, corneal abrasion, anterior chamber flare, vision blurred, injection site haemorrhage, eye haemorrhage, conjunctivitis, conjunctivitis allergic, eye discharge, photopsia, photophobia, ocular discomfort, eyelid oedema, eyelid pain, conjunctival hyperaemia, cough, nausea, allergic reactions (rash, urticaria, pruritus, erythema). *Please refer to the Summary of Product Characteristics for a full list of adverse events.*

LEGAL CATEGORY: POM.

PACK SIZES: one pre-filled syringe packed in a sealed tray.

MARKETING AUTHORISATION HOLDER: Novartis Europharm Limited, Frimley Business Park, Camberley GU16 7SR, United Kingdom.

MARKETING AUTHORISATION NUMBERS: EU/1/06/374/003

Please refer to Summary of Product Characteristics (SmPC) before prescribing. Full prescribing information is available on request from Novartis Pharma Services Inc., Representative Office Malta, P.O. Box 4, MRS 1000, Marsa, Malta. Tel+356 21222872.
2016-LUCP-14-NOV-2016

Any suspected adverse reactions and medication errors can be reported via the national Adverse Drug Reactions (ADRs) reporting system. Report forms can be downloaded from http://www.medicinesauthority.gov.mt/adrportal and posted to:

Medicines Authority Post-licensing Directorate,
Sir Temi Zammit Buildings,
Malta Life Sciences Park,
San Gwann. SGN 3000.

Or sent by e-mail to postlicensing.medicinesauthority@gov.mt.

Healthcare Professionals may also report any adverse events suspected to be associated with the use of Lucentis to Novartis Pharma Services Inc., Representative Office, Malta, by phone on 21222872, by fax on 22487219 or e-mail at drug_safety.malta@novartis.com.

Marketing Authorization Holder: Novartis Europharm Limited, Frimley Business Park, Camberley GU16 7S4, United Kingdom.

Local Representative: Novartis Pharma Services Inc., Representative Office Malta.
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