

**DIRECTIONS FOR USE FOR THE XEN® 45 GLAUCOMA TREATMENT SYSTEM**

**REF** 5507-001

**Allergan**

**DEVICE DESCRIPTION**

The XEN Glaucoma Gel Implant is intended to create a channel through the sclera allowing flow of aqueous humor from the anterior chamber into the subconjunctival space to reduce intraocular pressure (IOP). The XEN Gel Implant is inserted using the XEN Injector via an *ab interno* approach or *ab externo* approach.

The XEN Glaucoma Treatment System is comprised of the following sterile components:

- XEN Glaucoma Gel Implant; preloaded in XEN Injector

The XEN Glaucoma Treatment System is a sterile, single-use component. The XEN Injector is for single use only and is not reusable. Reuse may result in contamination, loss of function, and other undesirable side effects. Examine the packaging to verify the appropriate model has been selected and product has not expired prior to implantation.

Implant composition: Porcine-derived gelatin and glutaraldehyde.

Implant weight: approximately 215 µg.

**MODEL DIMENSIONS**

The XEN 45 Gel Implant has the following approximate dimensions:

XEN 45 Model	Length	Outside Diameter	Inside Diameter
5507-001	6 mm	150 µm	45 µm

**XEN GEL IMPLANT**

The XEN Gel Implant is composed of a gelatin derived from porcine dermis, formed into a tube, and then cross-linked with glutaraldehyde. The gelatin is designed to expand and become flexible when hydrated. The expansion of the tube’s outer diameter also aids in retention of the Gel Implant in its intended location after surgical implantation.

**XEN INJECTOR**

The XEN Injector is a single use mechanical delivery system for the XEN Gel Implant. The Gel Implant is preloaded in the XEN Injector which houses the Gel Implant during insertion and delivery into the eye. The XEN Injector allows the surgeon to advance and deliver the Gel Implant to the desired location.

**INDICATIONS**

The XEN Gel Implant is intended to reduce intraocular pressure in patients with primary open angle glaucoma where previous medical treatments have failed.

**CONTRAINDICATIONS**

The XEN Gel Implant is contraindicated under the following circumstances or conditions: Angle closure glaucoma, previous glaucoma shunt/valve in the target quadrant, presence of conjunctival scarring, prior conjunctival surgery or other conjunctival pathologies (e.g., pterygium) in the target quadrant, active inflammation (e.g., blepharitis, conjunctivitis, keratitis, uveitis), active iris neovascularization or neovascularization of the iris within six months of the surgical date, anterior chamber intraocular lens, presence of intraocular silicone oil, vitreous present in the anterior chamber, impaired episcleral venous drainage (e.g., Sturge-Weber or nanophthalmos or other evidence of elevated venous pressure), known or suspected allergy or sensitivity to drugs required for the surgical procedure or any of the device components (e.g., porcine products or glutaraldehyde), history of dermatologic keloid formation.

## WARNINGS

The following may occur in conjunction with the use of the XEN Gel Implant: Gel Implant migration, Gel Implant exposure or extrusion, Gel Implant blockage, choroidal effusion or hemorrhage, hypotony maculopathy, bleb related complications, choroidal detachment, conjunctival perforation, conjunctivitis, eye injury, fibrosis, high intraocular pressure, inflammation/irritation, irido-corneal touch, iridodialysis/iris rupture, iritis, lack of effectiveness, lacrimation, low intraocular pressure, malignant glaucoma, ocular pain, vision abnormalities, vision loss or endophthalmitis, abscess, angle recession, cataract formation/progression, hypopyon, iris atrophy, punctate keratitis, scleritis, prion diseases, infections, intraocular foreign bodies, wound leak, need for additional surgical intervention and other known complications of intraocular surgery (e.g., flat or shallow chamber, hyphema, corneal edema, macular edema, retinal detachment, vitreous hemorrhage, uveitis, hyperemia, corneal decompensation, corneal endothelial cell loss).

## PRECAUTIONS

1. The XEN Gel Implant and Injector should be carefully examined in the operating room prior to use.
2. The patient's IOP should be monitored postoperatively. If the IOP is not adequately maintained after surgery, a therapeutic regimen or further intervention to reduce IOP should be considered.
3. In order to minimize trauma to the eye and associated complications, it is essential that the Gel Implant is placed in the proper location.
4. If increased resistance is observed at any time during the implantation procedure, stop the implantation procedure and use a new Injector.

## DIRECTIONS FOR USE

### 1. Remove XEN Injector from packaging

- a. The XEN Injector is supplied preloaded and ready to use. After removing the injector from the tray, verify that the slider is in the full back position as shown in Figure 1. If the slider travel lock is absent or the slider of the XEN Injector has actuated, the Gel Implant could be potentially damaged, and should not be used.



Figure 1: Slider in full back position

### 2. Remove needle cap and Gel Implant retention plug

- a. The XEN Injector is shipped with a needle cap to protect the needle and a Gel Implant retention plug to ensure the XEN Gel Implant does not migrate out of the needle during shipping.
- b. Remove the needle cap.
- c. Remove the Gel Implant retention plug by grasping it lightly near the end of the plug and gently pull it away from the needle.

### 3. Set Needle Bevel Angle Selector and remove slider travel lock

- a. The XEN Injector has an adjustment for the angle of the needle bevel and can be adjusted to the desired position by moving the angle selector.
- b. Remove the yellow travel lock by grasping and pulling up.

### 4. Perform surgery using *Ab Interno* Technique

**The following description is not a replacement for surgeon training. The XEN device is to be used by licensed ophthalmologists.**

NOTE: Ensure that the gel stent is free from Tenon's tissue by adopting a surgical technique that creates a space/pocket whether you perform the primary needling, PoST, or small incision, open the conjunctiva or not, or use an *Ab Interno* approach.

- a. Standard sterile ophthalmic surgery techniques are used to prepare the patient and the eye.
- b. The needle of the sterile XEN Injector preloaded with the XEN Gel Implant is advanced through the peripheral cornea and across the anterior chamber (i.e., *ab interno*) toward the targeted quadrant. Corneal entry should be at least 1 to 2 mm anterior to the limbus (i.e., not at the limbus or behind it) to ensure there is a proper angulation on the Gel Implant up and away from the iris. The Gel Implant should be placed through the center of the angle.

- c. Once the needle is aligned with the desired entry point in the anterior chamber angle, the surgeon advances the needle in the anterior chamber angle and sclera until the surgeon is able to visualize the needle bevel as it exits the sclera into the subconjunctival space.
- d. The surgeon initiates release of the XEN Gel Implant by moving the slider of the XEN Injector. To deploy the Gel Implant, a forward movement of the blue slider at the center of the Injector delivers the Gel Implant and retracts the needle. The slider will stop at the end of its travel indicating that the procedure is complete.

## 5. Perform surgery using *Ab Externo* Technique

**The following description is not a replacement for surgeon training. The XEN device is to be used by licensed ophthalmologists.**

NOTE: Ensure that the gel stent is free from Tenon's tissue by adopting a surgical technique that creates a space/pocket whether you perform the primary needling, PoST, or small incision, open the conjunctiva or not, or use an *Ab Externo* approach.

- a. Standard sterile ophthalmic surgery techniques are used to prepare the patient and the eye.
- b. Place and insert the needle tip of the XEN Injector preloaded with the XEN Gel implant at the sclera in the targeted area. Scleral entry should be at least 2 mm away from the limbus and the needle's tip should be oriented upward as the needle is pushed through the sclera, towards the anterior chamber.
- c. Once the needle is aligned at the entry point in the sclera, the surgeon should advance the needle through the sclera into the angle until the surgeon is able to visualize the needle tip in the anterior chamber.
- d. The surgeon initiates release of the XEN Gel Implant by moving the slider of the XEN Injector. To deploy the Gel Implant, a forward movement of the blue slider at the center of the Injector delivers the Gel Implant and retracts the needle. The slider will stop at the end of its travel indicating that the procedure is complete.

## 6. Discard

- a. Upon completion of the surgery, discard the XEN Injector in a manner consistent with facility local procedures and regulations for medical waste.

## ADVERSE EVENT REPORTING

Adverse events and/or potentially sight-threatening complications that may reasonably be regarded as device related and not previously expected in nature, severity or incidence must be reported to Allergan, an AbbVie company.

## HOW SUPPLIED

Each XEN Injector preloaded with the XEN Gel Implant is supplied sterile and non-pyrogenic in a tray sealed with a Tyvek lid. The sealed tray is placed in a unit box with labels and product information. The Gel Implant and Injector have been sterilized utilizing gamma irradiation. If the sterile packaging is damaged or unintentionally opened before use, dispose of the device and use a new device.

## STORAGE

Store at room/ambient temperature.

## EXPIRATION DATE





















The expiration date on the device label is the sterility expiration date. In addition, there is a sterility expiration date clearly indicated on the outside of the unit box. Sterility is assured until the expiration date if the tray and Tyvek lid are not punctured or damaged and the seal is not compromised. This device should not be used past the indicated sterility expiration date.

## CLINICIAN INFORMATION

A copy of the directions for use can also be found at [www.abbvie.ca](http://www.abbvie.ca)

## RETURN GOODS POLICY

Product returns or exchanges must be authorized through your AbbVie representative. For more information, please contact your AbbVie representative.

Symbol	Description	Symbol	Description	Symbol	Description
	Consult instructions for use or consult electronic instructions for use		Use By (YYYY-MM)		Catalog / Model Number
	Sterilized using Irradiation (Gamma)		Serial Number		Do Not Use If Package Is Damaged and Consult Instructions for Use
	Manufacturer		Do Not Reuse		Lot Number
	Unique Device Identifier		Date of Manufacture		This Product is a Medical Device
	Country of manufacture		Single Sterile Barrier System		Single Sterile Barrier System with Protective Packaging Outside
	Keep dry		Patient Information Website		Patient Identification
	Date Implantation Was Performed		Name and Address of Doctor or Healthcare Center		



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