VISIONCARE'S IMPLANTABLE MINIATURE TELESCOPE (BY DR. ISAAC LIPSHITZ)

AN INTRAOCULAR TELESCOPE FOR TREATING SEVERE TO PROFOUND VISION IMPAIRMENT DUE TO BILATERAL END-STAGE AGE-RELATED MACULAR DEGENERATION

PROFESSIONAL USE INFORMATION

IMPORTANT INFORMATION

Please read this entire booklet. A thorough understanding of the principles, clinical application, risks, and benefits associated with VisionCare's Implantable Miniature Telescope (by: Dr. Isaac Lipshitz) is necessary before using this product. Provide the Patient Information Booklet to candidate patients and advise them to read or have it read to them by a friend or family member. Give the patient ample time to consider whether to have the procedure. Please encourage and provide candidate patients the opportunity to ask you questions and to ask questions to their referring ophthalmologist or other eye care professionals. The patient and the implanting physician must complete an Acceptance of Risk and Informed Decision Agreement before intraocular telescope implantation surgery.

RESTRICTED DEVICE: U.S. Federal Law restricts this device to sale, distribution, and use by or on the order of a physician or other licensed practitioner.

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PROFESSIONAL USE INFORMATION

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VISIONCARE'S IMPLANTABLE MINIATURE TELESCOPE

(BY: DR. ISAAC LIPSHITZ)

PROFESSIONAL USE INFORMATION

GENERAL

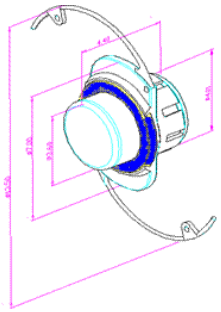
This brochure provides information about the benefits and risks of VisionCare's Implantable Miniature Telescope (by: Dr. Isaac Lipshitz), indications for use, safety information including restrictions, warnings, contraindications, and precautions, information about the training which the physician must have before implanting her or his first patient with the Implantable Miniature Telescope (by Dr. Isaac Lipshitz), information to be provided to the prospective patient before the patient decides whether to undergo surgery to implant the device, an Acceptance of Risk and Informed Decision Agreement which the patient and surgeon must sign before the intraocular telescope is implanted, a description of the device, detailed directions for use, and the results of the clinical studies.

Before a patient decides whether to have implantation of the intraocular telescope, he or she should be given a copy of the Patient Information Booklet and advised to read it or have it read to him or her by a family member or friend. The patient should be given sufficient time to consider whether he or she wishes to have the procedure. The patient should be given ample opportunity to ask questions and get answers from his/her referring ophthalmologist, the surgeon, eye care professionals at their offices, and family and friends.

DEVICE DESCRIPTION

VisionCare's Implantable Miniature Telescope (by Dr. Isaac Lipshitz) (intraocular telescope) is an implantable device which, when combined with the optics of the cornea, constitutes a telephoto system for improvement of visual acuity in patients with severe to

profound vision impairment due to bilateral, end-stage age-related macular degeneration. The intraocular telescope is surgically implanted in the capsular bag and is held in position by haptic loops. The intraocular telescope is available in two models: Wide Angle (WA) 2.2X, and Wide Angle (WA) 2.7X. Both models are indicated for monocular implant. The implanted eye provides central vision, while the fellow eye continues to be used for peripheral vision.



The intraocular telescope is composed of three primary components: a fused silica capsule that contains optical elements, a clear polymethylmethacrylate (PMMA) carrier, and a blue PMMA light restrictor. All materials are biocompatible for long-term ocular implantation per ISO 10993. One of the internal components (not in contact with body fluids or tissue) of the intraocular telescope contains stainless steel, has been evaluated for MRI compatibility and determined to be MR-Conditional. Product specifications are described in Table 1.

MRI SAFETY INFORMATION

The Implantable Miniature Telescope was determined to be **MR-conditional** according to the terminology specified in the American Society for Testing and Materials (ASTM) International, Designation: F2503-13. Standard Practice for Marking Medical Devices and Other Items for Safety in the Magnetic Resonance Environment. ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, Pennsylvania, 2005. Non-clinical testing demonstrated that the IMT™ (by Dr. Isaac Lipshitz) is MR conditional. MRI can be performed beginning immediately after implantation. However, it is recommended that MRI be performed no sooner than 1 week post-operatively to allow stabilization of the IMT in the capsular bag.
A patient with IMT device can be scanned safely in an MR system under the following conditions:

- Static magnetic field of 1.5-Tesla or 3-Tesla.
- Maximum spatial gradient magnetic field of 1,000-gauss/cm (10-T/m).
- Maximum MR System reported, whole body averaged specific absorption rate (SAR) of 2-W/kg for 15 minutes of

scanning (i.e., per pulse sequence) in the Normal Operating Mode of operation for the MR system.

Under the scan conditions defined, the Implantable Miniature Telescope is expected to produce a maximum temperature rise of 1.6°C after 15-minutes of continuous scanning (i.e., per pulse sequence). In non-clinical testing, the image artifact caused by the Implantable Miniature Telescope extends approximately 5-mm from the Implantable Miniature Telescope when imaged using a gradient echo pulse sequence and a 3-Tesla MR system.

TABLE 1
PRODUCT SPECIFICATIONS

FEATURE	MODEL WA 2.2X	MODEL WA 2.7X
MAGNIFICATION	2.2x ± 10%	2.7x ± 10%
DEPTH OF FIELD	1.5 to 10 m	1.5 to 10 m
OPTIMAL FOCUSING DISTANCE	3 m	3 m
FIELD OF VIEW	Full field: 24º (Nominal), 52.8º on the retina	Full field: 20º (Nominal), 54º on the retina
DIMENSIONS		
Overall Diameter	13.5 mm	13.5 mm
Clear Aperture	3.2 mm	3.2 mm
Telescope Diameter	3.6 mm	3.6 mm
Axial Length	4.4 mm	4.4 mm
Haptic Angulation	12.7°	12.7°
WEIGHT		
Air	115 mg + 10%	115 mg + 10%
Aqueous	60 mg + 10%	60 mg + 10%

INDICATION FOR USE

The intraocular telescope is indicated for monocular implantation to improve vision in patients greater than or equal to 65 years of age with stable severe to profound vision impairment (best corrected distance visual acuity 20/160 to 20/800) caused by bilateral central scotomas associated with end-stage age-related macular degeneration.

Patients must:

- have retinal findings of geographic atrophy or disciform scar with foveal involvement, as determined by fluorescein angiography
- have evidence of visually significant cataract (≥ Grade 2)
- agree to undergo pre-surgery training and assessment (typically 2 to 4 sessions) with low vision specialists (optometrist or occupational therapist) in the use of an external telescope sufficient for patient assessment and for the patient to make an informed decision
- achieve at least a 5-letter improvement on the ETDRS chart with an external telescope
- have adequate peripheral vision in the eye not scheduled for surgery
- agree to participate in postoperative visual training with a low vision specialist.

RESTRICTIONS

RESTRICTED DEVICE: U.S. Federal Law restricts this device to sale, distribution, and use by or on the order of a physician or other licensed practitioner.

Before first implanting the intraocular telescope, physicians must participate in the required portion of the Physician Training Program provided by VisionCare.

CONTRAINDICATIONS

Implantation of the intraocular telescope is contraindicated in patients:

- with Stargardt's macular dystrophy
- with central anterior chamber depth (ACD) <3.0 mm; measurement of the ACD should be taken from the posterior surface of the cornea (endothelium) to the anterior surface of the crystalline lens
- with the presence of corneal guttata
- who do not meet the minimum age and endothelial cell density requirements, as shown in the grid in Table 2:

TABLE 2
BASELINE ENDOTHELIAL CELL DENSITY

Age Range	65 to < 70	70 to <75	75 or Greater
Minimum Cell Density	2300	2000	1800

The minimum baseline endothelial cell counts described in Table 2 are based on endothelial cell loss assumptions calculated from the upper 90% confidence limits observed in the PMA clinical trial and long-term monitoring studies, in guttata-free eyes with anterior chamber depth ≥ 3.0 mm. Additional considerations were average life expectancies and end-of-life ECD of 750 cells/mm^2 to maintain corneal clarity, although the exact ECD needed is not known and varies from patient to patient. Patients with endothelial cell counts lower than the minimum cell density shown in the grid may have a higher risk of developing low ECD levels and corneal edema before end of life. Even patients who have baseline ECD above the levels shown in Table 2 may be at risk of corneal transplant if ECD loss due to surgery is high, the chronic rate of ECD loss is high, or life span is longer than average.

The device is also contraindicated in patients:

- with cognitive impairment that would interfere with the ability to understand and complete the Acceptance of Risk and Informed Decision Agreement or prevent proper visual training/rehabilitation with the device
- who have evidence of active CNV on fluorescein angiography or treatment for CNV within the past six months
- with any ophthalmic pathology that compromises the patient's peripheral vision in the fellow eye
- with previous intraocular or corneal surgery of any kind in the operative eye, including any type of surgery for either refractive or therapeutic purposes.
- who have prior or expected ophthalmic related surgery within 30 days preceding intraocular telescope implantation
- with a history of steroid-responsive rise in intraocular pressure, uncontrolled glaucoma, or preoperative IOP >22 mm Hg, while on maximum medication
- with known sensitivity to post-operative medications
- who have a history of eye rubbing or an ocular condition that predisposes them to eye rubbing
- in whom the planned operative eye has:
  - Myopia > 6.0 D
  - Hyperopia > 4.0 D
  - Axial length < 21 mm
  - A narrow angle, i.e., < Schaffer grade 2
  - Corneal stromal or endothelial dystrophies, including guttata
  - Inflammatory ocular disease
  - Zonular weakness/instability of crystalline lens, or pseudoexfoliation
  - Diabetic retinopathy
  - Untreated retinal tears
  - Retinal vascular disease
  - Optic nerve disease
  - A history of retinal detachment

- Intraocular tumor
- Retinitis pigmentosa.

- In eyes in which both haptics cannot be placed within the capsular bag during surgery, the intraocular telescope should be removed and replaced with a conventional intraocular lens (IOL); sulcus fixation of either one or both haptics increases the risk of severe endothelial cell loss and corneal transplant.

WARNINGS

- Patients undergoing intraocular telescope implant may be at risk of developing persistent unresolved corneal edema (corneal edema that continues), persistent vision-impairing corneal edema (continuing corneal edema leading to a loss of BCDVA > 2-lines from baseline level at last available visit) and may need corneal transplantation. In patients with longer anticipated life spans, longer exposure to the device is expected. Risk of developing persistent vision-impairing corneal edema and the possible need for corneal transplant increases over time. In the clinical study for FDA approval, there were:

  - 10 reports of persistent unresolved corneal edema (cumulative risk 8.5%, 95% confidence interval 3.2%, 13.7%) at both 5 years and 8 years of follow-up.

  - 8 reports of persistent vision-impairing corneal edema (cumulative risk 6.8%, 95% confidence interval 2.1%, 11.6%) at 5 years increasing to 10 reports (cumulative risk of 11.2%, 95% confidence interval 3.6%, 18.7%) at 8 years. Persistent vision-impairing corneal edema is a subset of persistent unresolved corneal edema.

  - 5 reports of corneal transplant (cumulative risk 3.9%, 95% confidence interval 0.4%, 7.5%) at both 5 and 8 years. Corneal transplant is a subset of persistent unresolved corneal edema.

- Only cornea specialists should implant the intraocular telescope. A cornea specialist is an ophthalmologist who had fellowship or other specialty training in diseases and surgery of the cornea and who regularly performs corneal surgical procedures such as penetrating keratoplasty.

- The potential for the device to alter intraocular pressure and long-term risk of glaucoma, anterior synechiae, and pigment dispersion are unknown.

- Surgical difficulties at the time of cataract extraction might increase the potential for complications, including persistent bleeding, significant iris damage, uncontrolled positive pressure, or significant vitreous prolapse or loss.

- Secondary surgical intervention may be necessary and include intraocular telescope repositioning, removal, corneal transplant, or intraocular telescope replacement.

- A small percentage of patients (< 4% in the clinical trial) may be dissatisfied to the point that they request and have the device explanted.

- Thermal lasers should be used with extreme caution around the device and never through the glass optical portion. Accidental focus of the laser beam on any glass part could cause glass fracture.

- Patients must be informed that participation in visual training/rehabilitation is necessary to maximize the benefit of the change in visual status.

- The intraocular telescope protrudes slightly through and above the plane of the iris. Patients must be informed that eye rubbing must be avoided due to risk of endothelial cell loss. Patients who are persistent eye rubbers are contraindicated.

- The intraocular telescope restricts the patient's peripheral field. The functional field of view will be generally limited to that of the non-implanted eye.

- The intraocular telescope implant is MR-Conditional (see "Note" in Section 2.0 for conditions).

PRECAUTIONS

PROVIDING INFORMATION TO THE PATIENT AND OBTAINING THE PATIENT'S AGREEMENT

- Before a patient decides whether to have implantation of the intraocular telescope, he or she should be given a copy of the Patient Information Booklet and advised to read it or have it read to him or her by a fa mily member or friend. The patient should be given sufficient time to consider whether he or she wishes to have the procedure. The patient should be given ample opportunity to ask questions and get answers from his/her referring ophthalmologist, the surgeon, eye care professionals at their offices, and family and friends. Special consideration or assistance may be needed for patients who are hearing impaired or for patients who do not have a good command of the English language.

- A physician or other health care professional should assess whether the patient is able to consider the benefits and risks of the intraocular telescope. The patient should be implanted with the intraocular telescope only after the patient, with full opportunity for consideration of the Patient Information Booklet, has signed the Acceptance of Risk and Informed Decision Agreement. For patients with impaired speech or hearing, it is advisable that a family member or trusted friend accompany the patient during the discussion and completion of the Acceptance of Risk and Informed Decision Agreement to better assure communications between the patient and physician are understood by the patient.

- Since the effectiveness of the preoperative screening and postoperative visual training/rehabilitation programs used in the clinical trial were not systematically investigated in the IDE clinical trial, their ability to predict candidates who will benefit from intraocular telescope implantation is unknown.

PRECAUTIONS CONCERNING THE RISKS OF IMPLANTATION OF THE INTRAOCULAR TELESCOPE

- The effects of the intraocular telescope on the corneal endothelium beyond eight years have not been established. Patients should undergo an eye exam at least once a year. This examination should include specular microscopy, to determine whether the cornea is at risk of edema. Physicians should use clinical judgment regarding any interventions related to endothelial cell density changes. The clinical study results for outcomes associated with explantation of the intraocular telescope should be reviewed.

- Intraocular telescope dimensions necessitate a 12 mm limbal incision and 7 mm capsulorhexis for implantation. Special care should be taken to minimize the risk of endothelial cell loss including attention to proper patient selection and appropriate surgical techniques.

- As with any surgical procedure, risk is involved. Potential complications accompanying crystalline lens removal and intraocular telescope implantation surgery may include, but are not limited to: corneal endothelial cell loss leading to corneal edema, corneal transplant, choroidal detachment, choroidal hemorrhage, microbial infection, retinal detachment, vitreous loss, posterior capsular rupture, intraocular inflammation, uveitis, etc.

- Inaccurate or unreliable measures of corneal endothelial cell density should be avoided. A non-contact specular microscope should be used for determining central corneal endothelial cell density. The images should provide distinct countable cells and contain a minimum of 100 identifiable cells. Three images of the central cornea should be taken and the results averaged. The instructions provided by the microscope manufacturer for taking images and endothelial cell density calculation should be followed.

- Patients with corneal endothelial cell coefficient of variation >0.45 may have a stressed endothelial cell layer, and may be prone to greater than normal endothelial cell loss if implanted with the intraocular telescope.

- Patients with corneal endothelial cell percent hexagonality <45% may have stressed endothelial cell layer, and may be prone to greater than normal endothelial cell loss if implanted with the intraocular telescope.

- Vision-related quality of life may not improve. 48.2% of patients did not report a clinically significant improvement in the NEI VFQ composite score. 22.3% of patients (43/193) lost at least 5 points in VFQ-25 composite score from baseline and 25.9% (50/193) of patients reported no significant change (i.e., change within ± 5 points).

Surgical techniques and other factors that may lead to increased ocular complications or corneal endothelial cell loss include, but are not limited to:

- Forcing the intraocular telescope into the anterior chamber through an incision that is too small.

- Corneal endothelial touch with surgical instruments, the intraocular telescope, or other intraocular matter.

- Excessive stretching (e.g., 'tenting') of the cornea.

- Inadequate intra-operative anterior chamber space management or peri-operative wound management leading to shallow chamber.

- Placing one or both carrier haptics outside of capsular bag (i.e., sulcus); this may result in a tilted device and greater risk of endothelial cell loss.

- Inadequate use of ocular viscoelastic devices.

Monocular intraocular telescope implantation will result in the following visual effects:

- The size difference in the retinal images in the central field will be too great to fuse binocularly.

- Non-corresponding images in the two eyes will produce either double vision or binocular rivalry and suppression effects whenever both eyes are open. The differences in image size, motion, and brightness in the two eyes may promote diplopia by disrupting the normal neural mechanisms and feedback circuits that control binocular

eye position and movements. Diplopia was reported in 4 (1.8%) of the subjects implanted with the intraocular telescope. Some subjects may find it difficult to judge the true position of objects in the environment under these conditions.

- Implantation of the intraocular telescope will limit the effective field of view in the implanted eye to the intraocular telescope field of view to 24° (WA 2.2X) or to 20° (WA 2.7X).

- The binocular temporal field will be obstructed on the side of the intraocular telescope implanted eye, and the limits of the binocular field are the same as those of the monocular field of the fellow eye.

- When the intraocular telescope field suppresses the overlapping region of the fellow eye field, vision will be obstructed in the annular region of the binocular visual field between the unmagnified and magnified outer limit of the intraocular telescope field, i.e., between eccentricities of 12° and 26.4° for the WA 2.2X model and 10° and 27° for the WA 2.7X model.

- Beyond the image projected onto the retina, approximately 55°, the intraocular telescope implanted eye will experience a permanent loss of patterned input to the peripheral retina. The implications of this are unknown.

- The magnified retinal image in the intraocular telescope implanted eye will move faster than the retinal image in the fellow eye during consensual eye movements. The impact of this motion discrepancy is unknown. While nystagmus, disorientation and loss of balance were not reported by subjects implanted with the intraocular telescope in the clinical trial, the impact of intraocular telescope implantation on the vestibular system was not evaluated.

- Retinal illuminance in the intraocular telescope implanted eye will be reduced by the transmission times the inverse square of the power. For the 2.2 power and 2.7 power telescopes, the respective attenuation factors are about 0.8 and 1.0 log units, comparable to wearing a monocular sunglass. Although the impact of this attenuation on visual performance was not evaluated in the clinical trial,

it can be expected to reduce both contrast sensitivity and acuity in dim light conditions in the intraocular telescope implanted eye.

ADVERSE EVENTS IN THE INTRAOCULAR TELESCOPE CLINICAL TRIALS

Data for evaluation of the intraocular telescope were provided by prospective, multi-center clinical trials; IMT-002, a pivotal study, and protocol IMT-002-LTM, a long-term safety study in which patients implanted under protocol IMT-002 were followed through 5 years. The objective of the 2-year, prospective, 28-center IMT-002 study (n=217) was to evaluate the safety and effectiveness of the intraocular telescope for the improvement of visual acuity and vision-related quality of life in patients with bilateral moderate to profound central vision impairment (BCDVA between 20/80 and 20/800) due to untreatable, end-stage age-related macular degeneration.

Rates of significant adverse events reported in clinical studies IMT-002 and IMT-002-LTM are shown in Table 3[i].

[i] The data presented are based on results from study IMT-002, a 24 month pivotal study of the IMT and study IMT-002-LTM, a study that followed IMT subjects to 60 months. Sixty-month data was collected and reported after the date of FDA approval.

TABLE 3
SIGNIFICANT OCULAR ADVERSE EVENTS
OPERATED EYES (N=217)
STUDIES IMT-002 AND IMT-002-LTM

Significant Adverse Event – Device Related or Potentially Device Related	**n**	**% (n/217)**
Corneal transplant (subset of persistent vision-impairing corneal edema)	5	2.3%
Persistent[1] vision-impairing[2] corneal edema (subset of persistent unresolved corneal edema)	8	3.6%
Device failure	2	0.9%
Intraocular telescope removal	12	5.5%
Decrease in BCDVA[3]	15	6.9%
Persistent[1] unresolved corneal edema (subset of corneal edema reported > 30 days after surgery)	10	4.6%
Corneal edema reported > 30 days after surgery[4]	14	6.5%
Intraocular telescope dislocation	4	1.8%
Significant Adverse Event – Other		
Choroidal neovascularization	5	2.3%
Endophthalmitis	0	0%
Retinal detachment	0	0%
Retinal tear	0	0%

[1] Persistent – continuing
[2] Vision-impairing – decrease in BCDVA > 2 lines from baseline at the last available visit
[3] Decrease in BCDVA - decrease in BCDVA > 2 lines from baseline at the last available visit
[4] Corneal edema reported in 13 intraocular telescope-implanted eyes and in 1 operated eye not implanted with an intraocular telescope

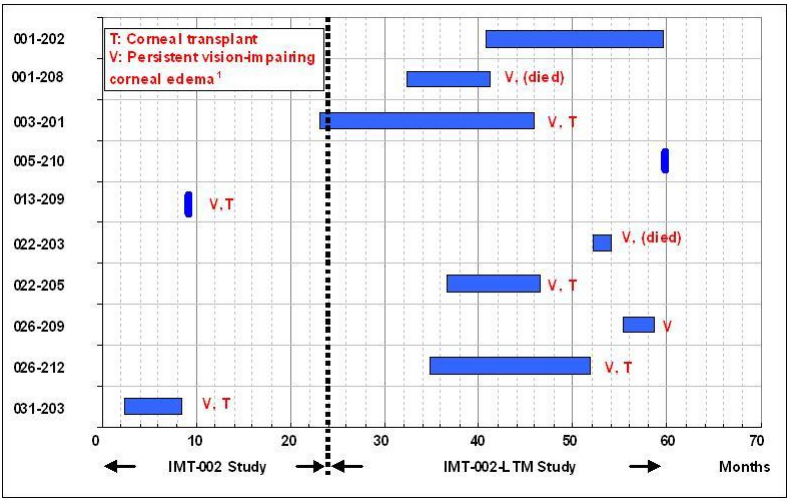
Information on less serious adverse events and on complications associated with the intraocular telescope is provided in Section 12 (Clinical Study Results) of this professional use information.

The timing of observation of persistent unresolved corneal edema for the 10 intraocular telescope-implanted eyes is shown in Figure 1[ii]. Of these 10 eyes, 8 developed persistent vision-impairing corneal edema. When ECD levels fall too low (< 750 mm^2), the cornea may become edematous, thicken and lose transparency, and corneal transplantation may be needed. Five intraocular telescope implanted eyes underwent corneal transplantation. The

[ii] The data presented are based on results from study IMT-002, a 24 month pivotal study of the IMT and study IMT-002-LTM, a study that followed IMT subjects to 60 months. Sixty-month data was collected and reported after the date of FDA approval.

endothelial cell density needed to maintain corneal transparency is unknown and varies from patient to patient.

FIGURE 1
INTRAOCULAR TELESCOPE-IMPLANTED EYES WITH PERSISTENT UNRESOLVED EDEMA
TIME OF OBSERVATION OF CORNEAL EDEMA
STUDIES IMT-002 AND IMT-002-LTM



[1] Persistent vision-impairing corneal edema (continuing corneal edema leading to a loss of BCDVA > 2-lines from baseline level at last available visit)

As shown in Figure 1, most cases (8 of 10) of persistent unresolved corneal edema first appeared later postoperatively (at >18 months postoperatively), rather than in the early postsurgical time period.

RISK OF MAJOR EVENTS RELATED TO ENDOTHELIAL CELL LOSS, CORNEAL EDEMA, AND VISION LOSS

Using Kaplan-Meier survival analysis, the risk to an individual patient of some of the more serious adverse events was estimated for a 5-year postoperative period utilizing data from studies IMT-002 and IMT-002-LTM. Events were estimated for an additional postoperative period using data from post-approval study IMT-002-LTME, which enrolled patients participating in IMT-002 and followed them to 8 years (summary results of study IMT-002-LTME are provided in Section 13). (The analyses take into account the loss to follow-up during the study. The number of patients at risk in the tails (2,750 to 3,000 days after telescope implantation) of the Kaplan-

Meier estimates are small, the variance in the estimate is large, and the reliability of the estimate is low.

As shown in Table 4[iii], the cumulative probability of persistent unresolved corneal edema over 5 years was 8.5% and remained unchanged at 8 years. For persistent vision-impairing corneal edema, a subset of persistent unresolved corneal edema, the cumulative probability for this adverse event was 6.6% at 5 years and increased to 11.2% 8 years after surgery. Persistent vision-impairing corneal edema may require corneal transplant. There were 8 cases of persistent vision-impairing corneal edema at 5 years and 10 cases at 8 years; 2 of these patients died without corneal transplant and 3 patients did not receive a transplant (reasons unknown). There were 5 observed cases of corneal transplant at 5 years with no additional cases reported 8 years after surgery. The cumulative probability of corneal transplant at both 5 and 8 years was 3.9%.

[iii] The data presented are based on results from study IMT-002, a 24 month pivotal study of the IMT, study IMT-002-LTM, a study that followed IMT subjects to 60 months and study IMT-002-LTME which followed subjects to 96 months. Sixty-month to 96-month data was collected and reported after the date of FDA approval.

TABLE 4
CUMULATIVE NUMBER OF EVENTS AND PROBABILITY OF PERSISTENT UNRESOLVED CORNEAL EDEMA AND THE SUBSETS OF PERSISTENT VISION-IMPAIRING CORNEAL EDEMA AND CORNEAL TRANSPLANT 206 INTRAOCULAR TELESCOPE-IMPLANTED EYES STUDIES IMT-002 , IMT-002-LTM, & IMT-002-LTME

Years from Implant	Persistent Unresolved Corneal Edema		Persistent Vision-Impairing Corneal Edema[1]		Corneal Transplant[2]	
	Cum # of Events	Cum Prob[3]	Cum # of Events	Cum Prob[3]	Cum # of Events	Cum Prob[3]
	95% CI of Cum Prob		95% CI of Cum Prob		95% CI of Cum Prob	
1.0 Year (365 Days)	2 (0.0%, 2.4%)	1.0%	2 (0.0%, 2.4%)	1.0%	2 (0.0%, 2.4%)	1.0%
2.0 Years (730 Days)	3 (0.0%, 3.8%)	1.8%	2 (0.0%, 2.4%)	1.0%	2 (0.0%, 2.4%)	1.0%
3.0 Years (1095 Days)	5 (0.4%, 6.4%)	3.4%	3 (0.0%, 3.9%)	1.8%	2 (0.0%, 2.4%)	1.0%
4.0 Years (1461 Days)	7 (1.3%, 8.8%)	5.1%	6 (0.9%, 8.3%)	4.6%	4 (0.0%, 5.9%)	2.9%
5.0 Years (1826 Days)	10 (3.2%, 13.7%)	8.5%	8 (2.0%, 11.2%)	6.6%	5 (0.4%, 7.5%)	3.9%
6.0 Years (2191 Days)	10 (3.2%, 13.7%)	8.5%	8 (2.0%, 11.2%)	6.6%	5 (0.4%, 7.5%)	3.9%
7.0 Years (2556 Days)	10 (3.2%, 13.7%)	8.5%	8 (2.0%, 11.2%)	6.6%	5 (0.4%, 7.5%)	3.9%
8.0 Years[5] (2993 Days)	10 (3.2%, 13.7%)	8.5%	10[4] (3.6%, 18.7%)	11.2%	5 (0.4%, 7.5%)	3.9%

1 Persistent vision-impairing corneal edema with BCDVA loss > 2 lines from baseline at the last available visit. This is a subset of persistent unresolved corneal edema.

2 This is a subset of persistent unresolved corneal edema

3 Cum Prob = cumulative Kaplan-Meier probability that a patient experienced the event. For each reported event, the onset date (or the first reported date) was used for patient reported events. For patient without the events, the last available dates during the study were used and treated as censored records.

4 5 of the 10 patients with vision-impairing unresolved corneal edema did not undergo corneal transplantation (2 patients died before undergoing transplant and corneal transplant was not performed in 3 patients [reasons unknown])

5 The number of patients at risk in the tail (between 2,750 and 3,000 days after telescope implantation) of the Kaplan-Meier estimate is small, the variance in the estimate is large, and the reliability of the estimate is low.

As shown in Table 5[iv], the cumulative probability of persistent ECD <1000 cells/mm^2 was 21.2% at 5 years and 23.4% 8 years after telescope implantation. The cumulative probability of persistent ECD <750 cells/mm^2 at 5 years and 8 years was 13.2% and 36.5% respectively. In telescope implanted eyes, the cumulative probability of a patient experiencing a loss of greater than 2 lines of best corrected distance visual acuity (BCDVA) over a period of 5 years was 12.3% and was 27.4% 8 years after surgery. In non-implanted fellow eyes, the cumulative probability of a loss of greater than 2 lines of BDCVA 20.9% at 5 years and 77.5% at 8 years. Loss of >2 lines BCDVA from baseline in a non-implanted fellow eye is not the same as it is in an implanted eye due to the telescopic magnification in the postoperative state. Non-implanted fellow eyes can use external telescopes to improve acuity, whereas implanted eyes cannot.

[iv] The data presented are based on results from study IMT-002, a 24 month pivotal study of the IMT, study IMT-002-LTM, a study that followed IMT subjects to 60 months and study IMT-002-LTME which followed subjects to 96 months. Sixty-month to 96-month data was collected and reported after the date of FDA approval.

TABLE 5
CUMULATIVE NUMBER OF EVENTS AND PROBABILITY OF PERSISTENT ECD < 1000 CELLS/MM[1] OR < 750 CELLS/MM[2] BCDVA LOSS > 2 LINES AT LAST VISIT 206 INTRAOCULAR TELESCOPE-IMPLANTED EYES STUDIES IMT-002, IMT-002-LTM AND IMT-002-LTME

Years from Implant	Persistent ECD < 1000[1] cells/mm[2]		Persistent ECD < 750[2] cells/mm[2]		Telescope Implanted Eye BCDVA Loss > 2 Lines[3] at Last Visit		Non-Implanted Fellow Eye BCDVA Loss > 2 Lines[3] at Last Visit	
	Cum # of Events	Cum Prob[4]	Cum # of Events	Cum Prob[4]	Cum # of Events	Cum Prob[4]	Cum # of Events	Cum Prob[4]
	95% CI of Cum Prob		95% CI of Cum Prob		95% CI of Cum Prob		95% CI of Cum Prob	
1.0 Year	23	11.5%	13	6.5%	4	2.0%	9	4.5%
(365 Days)	(7.1%, 15.9%)		(3.1%, 9.9%)		(0.1%, 3.9%)		(1.6%, 7.3%)	
2.0 Years	27	13.8%	17	8.6%	5	2.6%	19	9.7%
(730 Days)	(9.0%, 18.7%)		(4.7%, 12.6%)		(0.3%, 4.8%)		(5.6%, 13.9%)	
3.0 Years	27	13.8%	17	8.6%	6	3.4%	21	11.3%
(1095 Days)	(9.0%, 18.7%)		(4.7%, 12.6%)		(0.7%, 6.1%)		(6.7%, 15.9%)	
4.0 Years	33	19.1%	18	9.5%	11	7.8%	25	14.5%
(1461 Days)	(13.0%, 25.2%)		(5.3%, 13.8%)		(3.2%, 12.4%)		(9.1%, 20.0%)	
5.0 Years	35	21.2%	20	11.5%	14	11.2%	31	20.9%
(1826 Days)	(14.5%, 27.9%)		(6.5%, 16.6%)		(5.3%, 17.0%)		(13.9%, 27.9%)	
6.0 Years	35	21.2%	21	13.2%	15	12.6%	32	22.3%
(2191 Days)	(14.5%, 27.9%)		7.3%, 19.0%		(6.2%, 19.0%)		(14.9%, 29.7%)	
7.0 Years	35	21.2%	21	13.2%	15	12.3%	32	22.3%
(2556 Days)	(14.5%, 27.9%)		(7.3%, 19.0%)		(6.2%, 19.0%)		(14.9%, 29.7%)	
8.0 years[5]	36	23.4%	23	36.5%	21	27.4%	38	77.5%
(2976) Days	(15.6%, 31.1%)		(0.2%, 72.8%)		(14.7%, 40.2%)		(41.2%, 100%	

[1] ECD < 1000 at two consecutive visits or at the last available visit.
[2] ECD < 750 at two consecutive visits or at the last available visit.
[3] BCDVA loss > 2 lines from baseline at the last available visit.
[4] Cum Prob = cumulative Kaplan-Meier probability that a patient experienced the event. For each reported event, the onset date (or the first reported date) was used for patient reported events. For patient without the events, the last available dates during the study were used and treated as censored records.
[5] The number of patients at risk in the tail (between 2,750 and 3,000 days after surgery) of the Kaplan-Meier estimate is small, the variance in the estimate is large, and the reliability of the estimate is low.

There were, as shown in Table 6[v] below, no reports of retinal detachment at both 5 and 8 years after telescope implantation. The cumulative probability of device explant was 7.1% at 5 years after surgery and 11% at 8 years. There were 2 reports of device

[v] The data presented are based on results from study IMT-002, a 24 month pivotal study of the IMT, study IMT-002-LTM, a study that followed IMT subjects to 60 months and study IMT-002-LTME which followed subjects to 96 months. Sixty-month to 96-month data was collected and reported after the date of FDA approval.

malfunction at 1 year, a cumulative probability of 1%, which did not change through 8 years after surgery.

TABLE 6
Cumulative Number of Events and Probability of Retinal Detachment, Device Explant, and Device Malfunction
206 INTRAOCULAR TELESCOPE IMPLANTED EYES
STUDIES IMT-002, IMT-002-LTM, AND IMT-002-LTME

Years from Implant	Retinal Detachment		Device Explant		Device Malfunction	
	Cum # of Events	Cum Prob[1]	Cum # of Events	Cum Prob[1]	Cum # of Events	Cum Prob[1]
	95% CI of Cum Prob		95% CI of Cum Prob		95% CI of Cum Prob	
1.0 Year	0	0.0%	7	3.5%	2	1.0%
(365 Days)	(0.0%, 0.0%)		(1.1%, 9.1%)		(0.0, 2.3%)	
2.0 Years	0	0.0%	9	4.7%	2	1.0%
(730 Days)	(0.0%, 0.0%)		(1.7%, 11.0%)		(0.0, 2.3%)	
3.0 Years	0	0.0%	11	6.3%	2	1.0%
(1095 Days)	(0.0%, 0.0%)		(3.3%, 15.5%)		(0.0, 2.3%)	
4.0 Years	0	0.0%	12	7.1%	2	1.0%
(1461 Days)	(0.0%, 0.0%)		(4.3%, 17.8%)		(0.0, 2.3%)	
5.0 Years	0	0.0%	12	7.1%	2	1.0%
(1826 Days)	(0.0%, 0.0%)		(3.1%, 11.1%)		(0.0, 2.3%)	
6.0 Years	**0**	0.0%	12	7.1%	2	1.0%
(2191 Days)	(0.0%, 0.0%)		(3.1%, 11.1%)		(0.0, 2.3%)	
7.0 Years	0	0.0%	14	11.0%	2	1.0%
(2556 Days)	(0.0%, 0.0%)		(4.5%, 17.5%)		(0.0, 2.3%)	
8.0 Years	0	0.0%	14	11.0%	2	1.0%
(2976 Days)[2]	(0.0%, 0.0%)		(4.5%, 17.5%)		(0.0, 2.3%)	

[1] Cum Prob = cumulative Kaplan-Meier probability that a patient experienced the event. For each reported event, the onset date (or the first reported date) was used for patient reported events. For patient without the events, the last available dates during the study were used and treated as censored records.

[2] The number of patients at risk in the tail (between 2,750 and 3,000 days after telescope implantation) of the Kaplan-Meier estimate is small, the variance in the estimate is large, and the reliability of the estimate is low.

CUMULATIVE RISK OF ANY OCCURRENCE OF PERSISTENT VISION-IMPAIRING CORNEAL EDEMA, CORNEAL TRANSPLANTATION, RETINAL DETACHMENT, DEVICE EXPLANT OR DEVICE MALFUNCTION

Table 7[vi] below provides a Kaplan-Meier analysis of the cumulative risk of any occurrence of persistent vision-impairing corneal edema,

[vi] The data presented are based on results from study IMT-002, a 24 month pivotal study of the IMT, study IMT-002-LTM, a study that followed IMT subjects to 60 months and study IMT-002-LTME which followed subjects to 96 months. Sixty-month to 96-month data was collected and reported after the date of FDA approval.

corneal transplantation, retinal detachment, device explant, or device malfunction. For subjects reported with multiple events, the first onset date was used in the analysis. For subjects without any events, the last available visit dates were used and the records were treated as the censored records in the Kaplan-Meier analysis.

Five years after telescope implantation, 18 telescope implanted eyes were reported with at least 1 of the 5 safety events, a cumulative probability of 12.6%. During the 8-year follow-up period, 21 telescope implanted eyes were reported with at least one of the safety events, a cumulative probability of 18.8%.

TABLE 7
CUMULATIVE NUMBER OF EVENTS AND CUMULATIVE KAPLAN-MEIER PROBABILITY OF ANY OCCURRENCE OF PERSISTENT VISION-IMPAIRING CORNEAL EDEMA, Corneal TRANSPLANT, RETINAL DETACHMENT, DEVICE REMOVAL OR DEVICE MALFUNCTION
206 IMT-IMPLANTED EYES
STUDIES IMT-002, IMT-002-LTM AND IMT-002-LTME

Years from Implant	Cumulative Number of Events	Cumulative Probability of Events	95% CI of Cumulative Probability
1.0 Year (365 Days)	7	3.5%	(0.9%, 6.0%)
2.0 Years (730 Days)	9	4.7%	(1.7%, 7.7%)
3.0 Years (1095 Days)	12	7.1%	(3.1%, 11.1%)
4.0 Years (1461 Days)	16	10.6%	(5.5%, 15.7%)
5.0 Years (1826 Days)	18	12.6%	(6.9%, 18.3%)
6.0 Years (2191 Days)	18	12.6%	(6.9%, 18.3%)
7.0 Years (2556 Days)	19	14.4%	(7.8%, 21.1%)
8.0 Years[1] (2993 Days)	21	18.8%	(10.2%, 27.4%)

1 The number of patients at risk in the tail (between 2,750 and 3,000 days after telescope implantation) of the Kaplan-Meier estimate is small, the variance in the estimate is large, and the reliability of the estimate is low.

Note that the risk for new events increased over time during the first 8 years and may continue to increase.

PATIENT SCREENING PROCEDURE

When it has been established that the patient may be a candidate for implantation of the intraocular telescope, patients will participate in pre-surgery training with low vision specialists, including use of an external telescope, and visual acuity testing with an external telescope will be performed using ETDRS (Early Treatment Diabetic Retinopathy Trial) charts. Patients must achieve at least a five letter

improvement on the ETDRS chart in the eye scheduled for surgery with at least one of the external telescopes and sign the Acceptance of Risk and Informed Decision Agreement, in order to be allowed to proceed with the surgery. Patients who do not meet these criteria should not be implanted with the intraocular telescope.

DIRECTIONS FOR USE

DEVICE PREPARATION

Diagnostic testing, including corneal endothelial cell density and anterior chamber depth measurements, to determine if candidates meet minimum requirements should be performed preoperatively.

1. Check the label on the outer package for proper intraocular telescope model and expiration date. Inspect the packaging to insure it is not damaged. Open the external packages and remove the sterile barrier package.
2. In a sterile environment, peel to open the pouch to present the device case.
3. While keeping the container in a horizontal position, twist and remove the screw cap. The anterior aspect of the device is up, as it sits in the case. Do not re-screw cap back on case.
4. Use forceps to grasp clear carrier plate when removing device from case. Avoid grasping or handling of haptic loops and glass telescope.
5. Examine the intraocular telescope thoroughly to ensure it is free from debris, and examine the optical surfaces under magnification for other defects.

The optical portion of the intraocular telescope is comprised of fragile glass components. Do not impose any mechanical forces on the optical portion. Grasp the device only by the clear PMMA carrier plate. Do not re-sterilize the device by any method. Do not soak or rinse the device with any solution other than sterile balanced salt solution or sterile normal saline.

PATIENT PREPARATION

Induce anesthesia by retrobulbar or peribulbar injection. Administer mydriatic agents to ensure adequate pupil dilatation during surgery. Place a lid speculum on the eye to be implanted, to provide maximum cornea exposure. Position the operating microscope over or in front of the eye to be treated. Illumination from the operating microscope provides adequate visualization during the procedure.

INTRAOCULAR TELESCOPE IMPLANTATION

The intraocular telescope should be implanted in the capsular bag using a limbal insertion technique. The crystalline lens must be removed before the device can be implanted in the capsular bag. Lens extraction can be performed using the surgeon's preferred method with phacoemulsification. The device is intended for placement in an intact capsular bag with a 7 mm anterior capsulorhexis after extraction of the crystalline lens. Do not implant if there is zonular instability or inadequate capsular bag integrity.

The following steps have been identified as the appropriate surgical technique:

1. Maximally dilate the pupil. Create a 12-13 mm conjunctival incision and achieve hemostasis by cautery. Create 12 mm partial thickness limbal groove. Note: Less beveled incision allows advantageous device entry angle into anterior chamber.

   Do not make a smaller incision, as it will make device implantation more difficult.

2. Create a paracentesis and inject ophthalmic viscosurgical devices (OVD) into the anterior chamber, e.g., "soft-shell technique." Coat endothelium with dispersive OVD and fill the anterior chamber (AC) with cohesive OVD.

3. After the incisions are made, create a continuous curvilinear capsular incision to achieve a 7.0 mm capsulorhexis.

   Do not make a smaller capsulorhexis as it makes intraocular telescope implantation more difficult.

4. Perform phacoemulsification to remove the crystalline lens utilizing settings that help preserve endothelial cells.

Special care should be taken to remove any cortical remnants and polish the posterior capsular bag.

Do not implant the intraocular telescope if capsule integrity is compromised - instead, insert an IOL.

5. Utilize the “soft-shell technique” to prepare the anterior segment, as follows. First, coat the endothelium with dispersive OVD (e.g., Viscoat); then inject cohesive OVD (e.g., Healon V or other viscoadaptive/cohesive OVD) to fill the AC and capsular bag. Note: lower viscosity OVDs may “burp” out during device insertion. Liberally coat the telescope (optical portion and leading haptic) with a dispersive OVD (e.g., Viscoat or equivalent). Enlarge the incision to 12 mm.

6. Using the dominant hand, grasp carrier plate of the intraocular telescope with forceps or a lens inserter while avoiding the glass optical apparatus. Damage (micro-cracks) to the glass optical apparatus can be induced during handling and manipulation. Do not grasp the glass optical apparatus. Compression of the optical element of the device resulting from improper handling by surgical instruments can also damage the device.

   The haptics are stiff - use of sharp forceps, when manipulated aggressively, can induce forces sufficient to damage or break the loops of the device.

7. Device implantation into capsular bag:

   a) Grasp the intraocular telescope by the device’s clear carrier plate;

   b) Lift the cornea maximally while avoiding “tenting;”

   c) Liberally coat the telescope (optical portion and leading haptic) with dispersive OVD prior to insertion. Avoid corneal touch during the implant procedure. Iris damage increases the risk of endothelial cell loss. Use OVD appropriately to maintain a deep chamber.

   d) Insert the leading loop into the bag with the intraocular telescope at approximately 45 degrees to the horizontal plane;

e) Both loops must be placed inside the capsular bag. Direct placement using a superior haptic compression technique should be employed.

Dialing the trailing haptic into position should be avoided, as the haptics are too stiff. A second instrument through the paracentesis incision may be helpful in holding the device steady during trailing haptic placement.

f) Loops are bimanually rotated to the 12:6 o'clock position.

8. Once the intraocular telescope is in place, place several uninterrupted sutures to create water-tight incision and prevent shallowing of the anterior chamber. Constrict the pupil.

9. Irrigate and meticulously aspirate OVD to minimize post-operative IOP spikes. Special care is to be taken to remove OVD between the carrier plate and the capsular bag.

10. A peripheral iridectomy should be performed to reduce the risk of pupillary block.

11. Place additional sutures to close the wound, trim and bury the knots.

12. Test the incision carefully for leakage. Wound leakage and a resulting flat anterior chamber may cause significant endothelial cell loss and corneal edema leading to corneal decompensation.

13. Administer a sub-Tenon's injection of betamethasone depot (or appropriate substitute) at the end of surgery.

POSTOPERATIVE TREATMENT

1. Avoid external pressure on the eye. Use a plastic eye-shield for several days.

2. Avoid ocular hypotension.

3. Administer one drop of a topical ophthalmic antibiotic solution following surgery, and then continue as per product labeling for at least 2 days.

4. Administer one drop of Voltaren Ophthalmic (diclofenac sodium 0.1%, CIBA Vision Ophthalmics) following surgery, and then continue as per product labeling for at least 2 days.
5. Administer prednisolone acetate (1%) administered every 2 waking hours for the first 2 weeks post-implantation, followed by administration every 4 waking hours for 2 to 4 weeks.
6. Gradually taper prednisolone acetate (1%) over the next 4 to 6 weeks for a total duration of postoperative steroid treatment of approximately 3 months. Tapering may be performed over a shorter period of time, if deemed appropriate by the prescribing physician.
7. Administer homatropine 5% twice daily for 4 to 6 weeks postoperatively. If homotropine is inadequate to maintain cycloplegia, atropine may be used.

EXAMINATION AND TREATMENT OF POSTERIOR SEGMENT

Visualization and treatment of the posterior segment, including the fundus, can be accomplished following implantation of the intraocular telescope. The fundus can be visualized at the slit lamp using a 90D hand-held lens or a three mirror contact lens; approximately 50-60 degrees of the retina can be observed through the intraocular telescope with this approach. In eyes where fundus visualization is difficult when using a hand-held lens it is recommended a contact lens be employed to stabilize the eye and provide a clearer view.

Peripheral visualization can be performed by indirect ophthalmoscopy with the eye fully dilated, such that the examiner can observe the retina outside of the intraocular telescope. This view of the peripheral retina is limited in eyes in which full dilation is not possible, however, it should be noted that even in a non-implanted eye, if dilation is limited, visualization of the peripheral retina may not be possible.

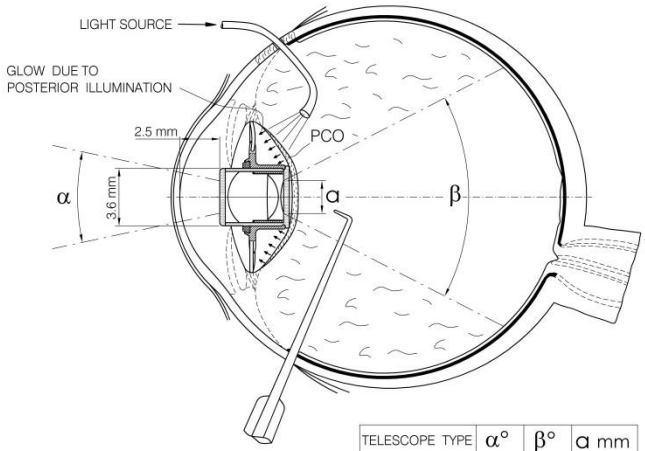
POSTERIOR CAPSULE OPACIFICATION

In the event visually significant posterior capsule opacification (PCO) occurs, a needling procedure may be used to treat PCO in

patients implanted with the intraocular telescope along with cleaning of the PCO by rupturing a rhexsis on the posterior wall of the capsular bag.

Two patients implanted with the intraocular telescope successfully underwent treatment for PCO with needling; one of these cases employed a pars plana approach using a 25-gauge vitrector to engage the posterior capsule (capsulotomy performed using a combination of peeling and direct vitrectomy), as shown in Figure 2.

FIGURE 2
PARS PLANA POSTERIOR



TELESCOPE TYPE	α°	β°	a mm
2.2X	24.0	52.8	2.314
3X	20.0	54.0	2.052

. ENVIRONMENTAL HAZARDS

If any of the following occurs, the product should be returned to the manufacturer immediately:

- If the package has been opened or damaged, as the intraocular telescope components or sterility of the device may be compromised.
- Damage to labeling that prevents clear identification of the printed labeling or the device.

- Damaged Tyvek® seal.
- Crushed/deformed package.
- Package exposed to temperatures higher than 54°C (129°F) and/or lower than -23°C (-9°F) for a period of more than 2 hours or stored at a temperature higher than 43°C (109°F) or lower than 0°C (32°F) for prolonged time.
- Package exposed to pressure higher than 1.2 atm (abs.) and/or lower than 0.5 atm (abs.).
- Do not store the device in direct sunlight or at a temperature higher than 43°C. Do not autoclave the device.
- Check the expiration date of the device before use. Do not use a device, which is past its expiration date.

CLINICAL STUDY RESULTS

Data from the intraocular telescope clinical trials, i.e., protocol IMT-002, a pivotal study and protocol IMT-002-LTM, a long-term safety study in which patients implanted with the intraocular telescope under protocol IMT-002 were followed through 5 years, are discussed in this section. The objective of the 2-year, prospective, 28-center IMT-002 study (n=217) was to evaluate the safety and effectiveness of the intraocular telescope for the improvement of visual acuity and vision-related quality of life in patients with bilateral moderate to profound central vision impairment (BCDVA between 20/80 and 20/800) due to untreatable, end-stage age-related macular degeneration. The results of these studies are presented.

DEMOGRAPHICS AND BASELINE CHARACTERISTICS

The demographic characteristics at baseline are presented in Table 8 for operated patients in IMT-002. At baseline, mean age was 75.6 and mean BCDVA was 20/312.

TABLE 8
DEMOGRAPHIC AND BASELINE CHARACTERISTICS
OPERATED PATIENTS (N=217)
STUDY IMT-002

217 Eyes of 217 Operated Patients

	Number	Percentage
Gender		
Female	103	47.5%
Male	114	52.5%
Age (In Years)		
Mean (SD)	75.6 (7.3)	
Anterior Chamber Depth		
Mean (SD)	3.15 (0.38)	
Minimum	2.48	
Maximum	4.74	
Type of AMD		
Geographic atrophy (GA)	85	39.2%
Disciform scar	93	42.9%
GA & Drusen	11	5.1%
GA & Disciform scar	8	3.7%
Drusen & Disciform scar	13	6.0%
GA & Drusen & Disciform scar	7	3.2%
Best-corrected Visual Acuity		
Mean BCDVA	20/312	
(Range)	(20/873, 20/80)	
Mean BCNVA @8"	20/315	
(Range)	(20/1262, 20/50)	
Mean BCNVA @16"	20/260	
(Range)	(20/632, 20/63)	

For study IMT-002 196 (90%) of 217 enrolled patients were available for analysis for the 12-month visit and 174 (80%) for the 24-month visit. In study IMT-002-LTM, 85 patients were enrolled for the 36-month visit and 129 for the 48-month visit. 84 (99%) patients were available for analysis for the 36-month visit, 106 (82%) were available for the 48-month visit, and 84 (65%) returned for the 60-month visit.

IMT-002 POST-OPERATIVE CHARACTERISTICS AND RESULTS

Surgical complications led to 11 patients not being implanted with the intraocular telescope, leaving a cohort of 206 intraocular telescope-implanted patients. Table 9 shows the data for the eyes that were operated but did not receive the intraocular telescope. Of the 206 implanted eyes, 115 eyes were implanted with the WA 2.2X model device and 91 eyes were implanted with the WA 2.7X model device.

Of the 11 patients not successfully implanted, in 5 eyes the intraocular telescope was not implanted because of surgical complications and in 6 eyes intraocular telescope implantation was attempted but the device was removed at the time of surgery, also as a result of surgical complications. An intraocular lens was placed in these 11 eyes rather than the intraocular telescope.

TABLE 9
OPERATED EYES WITHOUT INTRAOCULAR TELESCOPE PLACEMENT
STUDY IMT-002

Number of Eyes	Surgical Complication
Cases with Intraoperative Contraindications for Intraocular Telescope Implantation	
3	Posterior Capsule Tear
2	Choroidal Detachment
Cases with Intraocular Telescope Placed and Removed Intraoperatively	
4	Posterior Capsular Tear
1	Zonular Dehiscence
1	Choroidal Hemorrhage

SAFETY RESULTS

Safety results from the intraocular telescope clinical trials, protocol IMT-002, a pivotal study, and protocol IMT-002-LTM, a long-term safety study in which patients implanted with the intraocular telescope under protocol IMT-002 were followed through 5 years, are discussed in this section.

The analysis of safety was based on subjects that had surgery for intraocular telescope implantation. Corneal endothelial cell density results, preservation of visual acuity, complications and adverse events are described below for the study population.

CORNEAL ENDOTHELIAL CELL DENSITY (ECD)

The IMT-002 protocol called for testing the hypothesis that population mean endothelial cell loss at one year did not exceed 17% in intraocular telescope implanted eyes. The mean ECD loss at 12 months was 25% (95% confidence interval 28% to 21%), thus failing to meet the ECD loss endpoint.

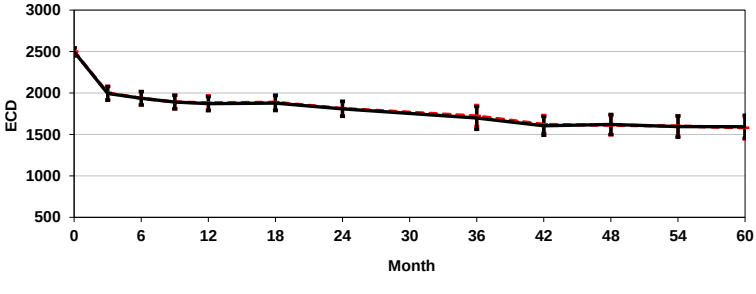
The most significant loss of corneal endothelial cells occurred from baseline to 3 months. This acute mean 20% (95% confidence interval 23%, 21%) ECD loss likely results from the 12 mm surgical

incision required for insertion of the intraocular telescope, as well as the manipulation of the device during implantation. The mean annual rate of chronic ECD loss estimated from all eyes at all time points through 48 months was 4.8% and through 60 months was 3.4% (see discussion of biexponential model, page 39).

Figures 3[vii] and 4[vii] show the mean ECD and mean ECD percent change respectively over time for operated eyes and intraocular telescope implanted eyes. For intraocular telescope implanted eyes, mean ECD at baseline was 2496 cells/mm.^{2} At 3 and 6 months after implantation, mean ECD was 1995 cells/mm^2 and 1937 cells/mm^2 respectively; these changes in mean ECD translated into mean ECD percent loss from baseline of 20% and 22%, respectively. Mean ECD at 12 months after device implantation was 1871 cells/mm^2, a 25% loss from baseline. Mean ECD at 24, 36, 48, and 60 months was 1808, 1713, 1620 and 1593 cells/mm^2, respectively, with associated mean percent losses of 28%, 31%, 35%, and 37%, respectively.

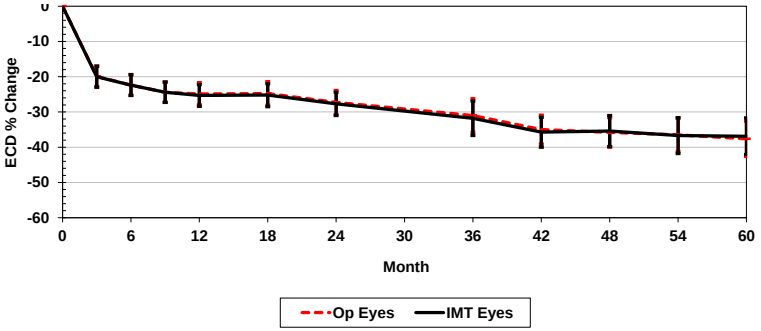
[vii] The data presented are based on results from study IMT-002, a 24 month pivotal study of the IMT and study IMT-002-LTM, a study that followed IMT subjects to 60 month. Sixty-month data was collected and reported after the date of FDA approval.

FIGURE 3
ECD (MEAN, CI)
OPERATED EYES AND INTRAOCULAR TELESCOPE IMPLANTED EYES
STUDIES IMT-002 AND IMT-002-LTM



		Preop	3 Months	6 Months	9 Months	12 Months	18 Months	24 Months	36 Months	42 Months	48 Months	54 Months	60 Months
Op Eyes	Mean	2498	2001	1936	1891	1881	1887	1813	1723	1621	1611	1601	1580
	95%CI	2451, 2546	1919, 2082	1855, 2016	1809, 1973	1795, 1967	1796, 1978	1723, 1903	1596, 1851	1513, 1729	1495, 1727	1479, 1723	1445, 1714
	N	216	198	200	190	190	182	173	80	109	94	77	76
	ECD<750*	0 (0%)	6 (3%)	8 (4%)	9 (5%)	9 (5%)	13 (7%)	12 (7%)	4 (5%)	8 (7%)	7 (7%)	6 (8%)	6 (8%)
IMT Eyes	Mean	2496	1995	1937	1891	1871	1878	1808	1699	1604	1620	1595	1593
	95%CI	2447, 2545	1912, 2078	1856, 2018	1809, 1973	1786, 1957	1787, 1969	1718, 1898	1561, 1837	1490, 1718	1499, 1741	1465, 1724	1454, 1733
	N	206	193	198	190	186	180	171	71	100	88	70	70
	ECD<750*	0 (0%)	6 (3%)	8 (4%)	9 (5%)	9 (5%)	13 (7%)	12 (7%)	4 (6%)	8 (8%)	7 (8%)	6 (9%)	5 (7%)

FIGURE 4
ECD % CHANGE (MEAN, CI) FROM BASELINE
OPERATED EYES AND INTRAOCULAR TELESCOPE IMPLANTED EYES
STUDIES IMT-002 AND IMT-002-LTM



		Preop	3 Months	6 Months	9 Months	12 Months	18 Months	24 Months	36 Months	42 Months	48 Months	54 Months	60 Months
Op Eyes	Mean	0%	-20%	-22%	-24%	-25%	-25%	-27%	-31%	-35%	-36%	-37%	-38%
	95%CI		-23%, -17%	-25%, -20%	-27%, -21%	-28%, -22%	-28%, -21%	-31%, -24%	-36%, -26%	-39%, -31%	-40%, -32%	-41%, -32%	-43%, -33%
	N	216	198	200	190	190	182	173	80	109	94	77	76
IMT Eyes	Mean	0%	-20%	-22%	-24%	-25%	-25%	-28%	-32%	-36%	-35%	-37%	-37%
	95%CI		-23%, -17%	-25%, -19%	-27%, -21%	-28%, -22%	-28%, -22%	-31%, -24%	-37%, -27%	-40%, -31%	-40%, -31%	-42%, -32%	-42%, -32%
	N	206	193	198	190	186	180	171	71	100	88	70	70

Even patients who have baseline ECDs above the levels shown in Table 2 (page 9, Contraindications section) may experience low ECD leading to corneal edema if they have above average ECD losses at surgery, over time, or have longer than average life spans.

The range of ECD percent loss in intraocular telescope-implanted eyes is presented in Table 10[viii].

[viii] The data presented are based on results from study IMT-002, a 24 month pivotal study of the IMT and study IMT-002-LTM, a study that followed IMT subjects to 60 months. Sixty-month data was collected and reported after the date of FDA approval.

Table 10
RANGE OF ECD PERCENT CHANGE FROM BASELINE
INTRAOCULAR TELESCOPE IMPLANTED EYE
STUDIES IMT-002 AND IMT-002-LTM

	3 Months	12 Months	24 Months	36 Months	48 Months	60 Months
Maximum Loss	-85%	-88%	-81%	-84%	-80%	-81%
95th Percentile	-67%	-69%	-75%	-69%	-74%	-71%
75th Percentile	-30%	-37%	-40%	-43%	-49%	-55%
50th Percentile	-13%	-21%	-24%	-28%	-36%	-37%
25th Percentile	-6%	-9%	-11%	-16%	-19%	-19%
5th Percentile	+6%	+1%	0%	-5%	-6%	+3%
Minimum Loss	+18%	+13%	+28%	+11%	-2%	-2%
N	193	186	171	70	88	70

Negative sign (-) indicates decrease from baseline; positive sign (+) indicates an increase from baseline

Table 11[ix] summarizes the number of eyes with last measured ECD <1000, <750, and <500 cells/mm^2. At the patient's last available visit (which varied among patients), 32 of 206 eyes (15.5%) had ECD < 1000 cells/mm^2. This included a subset of 19 eyes (9.2%) with ECD <750 cells/mm^2 and 7 eyes (2.9%) with ECD < 500 cells/mm.^{2} Limited numbers of patients were available for later visits. For the risk to the individual patient, please refer to the Kaplan-Meier analysis shown in Table 5.

[ix] The data presented are based on results from study IMT-002, a 24 month pivotal study of the IMT and study IMT-002-LTM, a study that followed IMT subjects to 60 months. Sixty-month data was collected and reported after the date of FDA approval.

TABLE 11
LAST AVAILABLE ECD < 1000, <750, <500 CELLS/MM^2
INTRAOCULAR TELESCOPE IMPLANTED EYES
(EXCLUDING RECORDS AFTER INTRAOCULAR TELESCOPE EXPLANTS AND CORNEAL TRANSPLANTS)
STUDIES IMT-002 AND IMT-002-LTM

ECD	N = 206		
	%	n/N	95% CI of %
ECD < 1000 cells/mm^2	15.5%	32/206	(10.9%, 21.2%)
ECD < 750 cells/mm^2	9.2%	19/206	(5.6%, 14.0%)
ECD < 500 cells/mm^2	2.9%	7/206	(1. 1%, 6.2%)

In some eyes, ECD decreased to <750 cells/mm^2 in the early postsurgical period. In other eyes, ECD first decreased to this level later in the study period, up to and past 60 months postoperatively.

Patients should be advised of the potential risk of corneal edema leading to persistent vision-impairing corneal edema and the need for a corneal transplant due to ECD loss resulting from surgery and be further advised that ECD will continue to decline at a rate significantly higher than the 0.6% annual rate of ECD loss in phakic eyes.

While long-term ECD data is available as described above, to characterize the rate of mean annual ECD loss, a biexponential model (Predicting Endothelial Cell Loss and Long-Term Corneal Graft Survival, W. Armitage, A. Dick, W. Bourne, *Investigative Ophthalmology and Vision Science*, August 2003, Vol. 44, No. 8) was developed to fit the ECD pattern from baseline to 48 months and to 60 months after intraocular telescope implantation. For all intraocular telescope implanted eyes the mean chronic annual ECD loss was 4.8% (90% confidence interval 3.4%, 6.2%) through 48 months and 3.4% (90% confidence interval 2.2%, 4.6%) through 60 months.

Using the biexponential model described above, Table 12[x] predicts the percentage of eyes with ECDs <1000, <750, and <500 cells/mm^2 through 60 months postoperative.

[x] The data presented are based on results from study IMT-002, a 24 month pivotal study of the IMT and study IMT-002-LTM, a study that followed IMT subjects to 60 months. Sixty-month data was collected and reported after the date of FDA approval.

TABLE 12
PREDICTED PROBABILITY OF ECD LESS THAN THRESHOLD BASED ON BI-EXPONENTIAL MODEL FOR INTRAOCULAR TELESCOPE IMPLANTED EYES ENROLLED IN IMT-002 OR IMT-002-LTM STUDY BASED ON DATA FROM BASELINE TO 60 MONTHS (EXCLUDING PREOPERATIVE RESIDUALS)

Time	Probability of ECD[1]		
	< 1000	< 750	< 500
3 Months	7.8%	3.1%	0.4%
12 Months	11.0%	6.0%	1.6%
24 Months	12.9%	6.3%	2.5%
36 Months	14.3%	8.5%	3.4%
48 Months	16.0%	9.3%	4.7%
54 Months	17.2%	10.0%	5.2%
60 Months	18.0%	10.5%	5.7%

[1] The empirical frequency of residuals was used to estimate these probabilities.

There was no evidence from studies IMT-002 and IMT-002-LTM that rate of loss of ECD declined over time or that the rate of new cases of corneal edema declined.

When ECD levels fall too low (< 750mm^2), the cornea may become edematous, thicken and lose transparency, and corneal transplantation may be needed. The endothelial cell density needed to maintain corneal transparency is unknown and varies from patient to patient. Possible risk factors for endothelial cell loss are described in the following section.

IDENTIFICATION OF POSSIBLE RISK FACTORS FOR ENDOTHELIAL CELL LOSS

A number of possible risk factors associated with ECD loss, including presence of guttata in the eye, surgical specialty, and anterior chamber depth, were evaluated[xi]. Some possible risk factors are described in Table 13 below. These and other contraindications, precautions, and warning issues are discussed in the device labeling.

These potential risk factors were identified after the study, based upon inspection of the study data. They were not based upon

[xi] The data presented are based on results from study IMT-002, a 24 month pivotal study of the IMT and study IMT-002-LTM, a study that followed IMT subjects to 60 months. Sixty-month data was collected and reported after the date of FDA approval.

testing protocol-defined hypotheses. This identification of risk factors is preliminary and not established by formal statistical testing. As a result, it is unclear how much, if at all, these factors may affect the loss of endothelial cells and associated rates of corneal edema.

TABLE 13
ENDOTHELIAL CELL DENSITY % LOSS POSSIBLE RISK FACTORS
INTRAOCULAR TELESCOPE-IMPLANTED EYES
STUDIES IMT-002 AND IMT-002-LTM

	3 Months		12 Months		24 Months		36 Months		48 Months		60 Months	
	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean
	95% CI		95% CI		95% CI		95% CI		95% CI		95% CI	
Intraocular Telescope-Implanted Eyes	193	**20%**	186	**25%**	171	**28%**	70	**31%**	88	**35%**	70	**37%**
	(17%, 23%)		(22%, 28%)		(24%, 31%)		(26%, 36%)		(31%, 40%)		(32%, 42%)	
Possible Risk Factors												
Guttata												
Not Present	167	**19%**	162	**24%**	150	**26%**	63	**31%**	76	**34%**	61	**36%**
	(16%, 22%)		(21%, 28%)		(23%, 30%)		(26%, 36%)		(29%, 39%)		(30%, 41%)	
Present	26	**26%**	24	**32%**	21	**36%**	7	**34%**	12	**44%**	9	**45%**
	(16%, 36%)		(22%, 42%)		(25%, 47%)		(20%, 47%)		(31%, 57%)		(29%, 61%)	
Surgeon Specialty												
Cornea Specialist	51	**13%**	52	**19%**	45	**20%**	18	**24%**	21	**25%**	16	**25%**
	(8%, 18%)		(14%, 24%)		(15%, 25%)		(17%, 30%)		(17%, 33%)		(17%, 37%)	
Non-Cornea Specialist	142	**23%**	134	**28%**	126	**30%**	52	**34%**	67	**39%**	54	**40%**
	(19%, 26%)		(24%, 32%)		(26%, 34%)		(28%, 40%)		(34%, 44%)		(35%, 46%)	
Anterior Chamber Depth												
≥3 mm	116	**19%**	117	**25%**	106	**26%**	40	**29%**	50	**34%**	39	**34%**
	(15%, 22%)		(21%, 28%)		(22%, 30%)		(23%, 35%)		(28%, 40%)		(27%, 41%)	
<3 mm	77	**22%**	69	**26%**	65	**30%**	30	**34%**	38	**37%**	31	41%
	(17%, 27%)		(21%, 32%)		(24%, 36%)		(26%, 42%)		(30%, 45%)		(33%, 48%)	

GUTTATA

Corneal guttata has been shown to be a risk factor for endothelial cell loss following cataract surgery. The same risk may be present in intraocular telescope implantation surgery. The percent ECD loss at 3 months postoperatively was lower in non-guttata eyes (mean loss 19%, 95% confidence interval 16%, 22%) than in eyes with guttata (mean loss 26%, 95% confidence interval 16%, 36%). Accordingly, the presence of guttata is a contraindication to the use of the intraocular telescope.

SURGEON SPECIALTY

ECD loss at 3 months was lower for intraocular telescope implanted eyes operated by cornea specialists (mean loss 13%, 95% confidence interval 16%, 22%) than by non-cornea specialists (mean loss 23%, 95% confidence interval 19%, 26%). ("Cornea specialist" is defined as ophthalmologists who had fellowship or other specialty training in diseases and surgery of the cornea and who were at the time of the study regularly performing cornea surgical procedures such as penetrating keratoplasty.) Although the number of study subjects implanted by a cornea specialist is modest, there was lower ECD loss in these subjects of clinicians experienced in the medical management and surgical treatment of the cornea. Accordingly, there is a warning that only cornea specialists should implant the intraocular telescope. The long-term ECD data for intraocular telescope implantation performed by cornea specialists is based on limited data from a limited number of investigation sites.

ANTERIOR CHAMBER DEPTH (ACD)

ACD ≥ 3.0 mm was associated with lower endothelial cell loss at 3 months postoperatively (mean loss 19%, 95% confidence interval 15%, 22%) as compared to patients with ACD < 3 mm (mean loss 22%, 95% confidence interval 17%, 27%). The finding of greater ECD loss in shallow anterior chambers (< 3.0 mm) at 3 months is likely the result of less working space in the anterior chamber and more surgical trauma to the corneal endothelial monolayer. Accordingly, the presence of an anterior chamber < 3.0 mm is a contraindication to the use of the intraocular telescope.

PRESERVATION OF VISUAL ACUITY

Protocol IMT-002 specified that preservation of visual acuity was to be assessed in terms of whether more than 10% of intraocular telescope-implanted eyes lost >2 lines of either BCDVA or BCNVA without a corresponding improvement in the other. This endpoint was met. At 12 months, 5% of eyes incurred such losses, and at 24 months, 6% of eyes incurred such losses.

At 36 months, 2 implanted eyes lost more than 2 lines of BCDVA, and 4 eyes (4.2%) lost more than 2 lines of BCDVA at 48 months.

Over the 5-year period for studies IMT-002 and IMT-002-LTM, there were 15 cumulative reports of BCDVA loss of >2 lines from baseline at the last available visit.

OCULAR COMPLICATIONS AND ADVERSE EVENTS

OCULAR COMPLICATIONS WERE DEFINED AS EVENTS DIRECTLY RELATED TO THE SURGICAL PROCEDURE FOR INTRAOCULAR TELESCOPE IMPLANTATION, WHETHER SUCCESSFUL OR NOT, OCCURRING IN THE OPERATIVE AND IMMEDIATE POSTOPERATIVE PERIOD. EVENTS OCCURRING AFTER THE IMMEDIATE POSTOPERATIVE PERIOD WERE CLASSIFIED AS ADVERSE EVENTS. OCULAR COMPLICATIONS AND OCULAR ADVERSE EVENTS REPORTED FOR THE IMT-002 AND IMT-002-LTM STUDIES ARE SHOWN IN TABLE 14[xii] ON THE FOLLOWING PAGES, WITH THE MORE SERIOUS EVENTS SHOWN FIRST IN EACH TABLE.

The intraocular telescope was not placed in 5 eyes due to surgical complications occurring prior to attempted implantation, primarily capsular rupture. The telescope was placed but removed intraoperatively in 6 eyes because of surgical complications (posterior capsule tear, zonular dehiscence, choroidal detachment). A standard intraocular lens was placed in these eyes.

Other significant ocular complications included corneal edema; iris damage and/or prolapse and transillumination defects; and vitreous loss (Table 14).

The most common ocular complication was increased IOP requiring treatment ≤ 7 days (N = 59; 27.2%). (Increased IOP reported beyond 7 days and requiring treatment was classified as an adverse event, not as an ocular complication.) Increased IOP classified as an ocular complication was likely associated with the liberal use of high molecular weight viscoelastic material (Healon V) in the eye. Other commonly reported (occurring at a rate of 5% or greater) ocular complications were corneal edema, posterior capsular opacification, iris prolapse, and corneal abrasions. Fourteen (14) cases (6.5%) of corneal edema occurred within 30 days of surgery; all 14 cases were first reported on postoperative Day 1 and three of these cases of corneal edema were still noted at the 1 month visit. Posterior capsular opacification was reported for 13 eyes (6.0%); surgical capsulotomy was successfully performed in one patient. Iris prolapse was observed in 12 eyes (5.5%) and 11 eyes (5.1%) had corneal abrasions.

[xii] The data presented are based on results from study IMT-002, a 24 month pivotal study of the IMT and study IMT-002-LTM, a study that followed IMT subjects to 60 months. Sixty-month data was collected and reported after the date of FDA approval.

TABLE 14
OCULAR COMPLICATIONS, OPERATED EYES (N=217)
STUDIES IMT-002 AND IMT-002-LTM

Significant Ocular Complications	n	% (n/217)
Aborted surgery	5	2.3%
Choroidal detachment	2	0.9%
Choroidal hemorrhage	1	0.5%
Corneal edema ≤ 30 days after surgery	14	6.5%
Iris atrophy ≤ 7 days after surgery	4	1.8%
Iris damage	9	4.1%
Iris incarceration	3	1.4%
Iris prolapse	12	5.5%
Iris transillumination defects ≤ 21 days after surgery	8	3.7%
Phthisis	1	0.5%
Posterior capsular rupture	10	4.6%
Vitreous hemorrhage ≤ 7 days after surgery	1	0.5%
Vitreous in anterior chamber ≤ 7 days after surgery	3	1.4%
Vitreous loss	3	1.4%
Vitreous loss - vitrectomy required	7	3.2%
Other Ocular Complications		
Afferent pupil defect	1	0.5%
Alternating exotropia	1	0.5%
Anterior chamber hemorrhage	1	0.5%
Anterior segment neovascularization	1	0.5%
Anterior synechiae	3	1.4%
Asthenopia	1	0.5%
Bleb	1	0.5%
Blepharitis	7	3.2%
Blurred vision	1	0.5%
Chalazion	2	0.9%
Conjunctival injection	4	1.8%
Corneal abrasion	11	5.1%
Corneal endothelial touch	3	1.4%
Corneal neovascularization	1	0.5%
Cortical remnants	2	0.9%
Cyclitic membrane ≤ 7 days after surgery	1	0.5%
Cyclodialysis cleft	1	0.5%
Descemet's membrane separation	3	1.4%
Dry eye	1	0.5%
Ecchymoses on eyelid	1	0.5%

TABLE 14
OCULAR COMPLICATIONS, OPERATED EYES (N=217)
STUDIES IMT-002 AND IMT-002-LTM

(CONTINUED)

Other Ocular Complications	n	% (n/217)
Ectropion	3	1.4%
Endothelial folds	2	0.9%
Epithelial basement membrane dystrophy	1	0.5%
Esotropia	1	0.5%
Exotropia	2	0.9%
Flashes	1	0.5%
Flat anterior chamber ≤ 21 days after surgery	2	0.9%
Folds in corneal graft	1	0.5%
Glare	1	0.5%
Glaucoma	1	0.5%
Haze	3	1.4%
Hyphema	10	4.6%
Hypotony	2	0.9%
Increased IOP requiring treatment ≤ 7 days after surgery	59	27.2%
Increased IOP ≤ 15 days after surgery	3	1.4%
Iridotomy ≤ 7 days after surgery	3	1.4%
Iritis ≤ 30 days after surgery	2	0.9%
Meibomian gland dysfunction	1	0.5%
Ophthalmic migraine	1	0.5%
Peribulbar hemorrhage	1	0.5%
Peripapillary hemorrhage	1	0.5%
Posterior capsule opacification	13	6.0%
Significant anterior chamber bleeding	3	1.4%
Strabismus	1	0.5%
Strabismus surgery	1	0.5%
Superficial punctate keratitis	2	0.9%
Surgical mydriasis	1	0.5%
Suture rupture	4	1.8%
Treatment of PCO	1	0.5%
Uveitis	1	0.5%
Uveitis/vitritis	1	0.5%
Vitreous bulge	1	0.5%
Watery eyes	3	1.4%
Worsening of subretinal scarring	1	0.5%

TABLE 14
OCULAR COMPLICATIONS, OPERATED EYES (N=217)
STUDIES IMT-002 AND IMT-002-LTM

(CONTINUED)

Wound leak	3	1.4%
Zonular dehiscence ≤ 7 days after surgery	1	0.5%

% = n/N ×100.

Significant adverse events (Table 15[xiii]) included persistent unresolved corneal edema (N=10, 4.6%), persistent vision-impairing corneal edema (N=8, 3.6%), corneal transplant (N=5, 2.3%), and decrease in BCDVA (N=15, 6.9%). Device failures, dislocation and removal are also significant adverse events.

Adverse events occurring at an incidence of 5% or greater included deposits or precipitates on intraocular telescope (N=71; 32.75%), guttae (N=22; 10.1%), posterior synechiae (N=21; 9.7%), corneal edema (N=14; 6.5%); iritis (N=12; 5.5%), iris transillumination defects (N=12; 5.5%), intraocular telescope removal (N=12; 5.5%), and distorted pupil (N=11; 5.1%). In the majority of eyes, deposits/precipitates on the intraocular telescope resolved over the course of patient follow-up and did not affect visual acuity. Pigment and inflammatory deposits were managed medically with a standardized course of anti-inflammatory agents, starting with a sub-Tenon's injection of betamethasone depot administered at the end of surgery followed by topical administration of prednisolone acetate 1% or equivalent tapering over 2-3 months. All remaining adverse events in study IMT-002 were reported at a frequency of less than 5.0%.

There were no cases of endophthalmitis, retinal detachment, or retinal tear in the study population.

TABLE 15
OCULAR ADVERSE EVENTS, OPERATED EYES (N=217)
STUDIES IMT-002 AND IMT-002-LTM

Significant Adverse Events	n	% (n/217)
Choroidal neovascularization	5	2.3%
Corneal edema > 30 days after surgery *	14	6.5%

TABLE 15
OCULAR ADVERSE EVENTS, OPERATED EYES (N=217)
STUDIES IMT-002 AND IMT-002-LTM

[xiii] The data presented are based on results from study IMT-002, a 24 month pivotal study of the IMT and study IMT-002-LTM, a study that followed IMT subjects to 60 months. Sixty-month data was collected and reported after the date of FDA approval.

(CONTINUED)

Significant Adverse Events	n	% (n/217)
Corneal transplant (subset of persistent vision-impairing corneal edema)	5	2.3%
Decrease in BCDVA	15	6.9%
Device failure	2	0.9%
Endophthalmitis	0	0%
Iris atrophy > 7 days after surgery	9	4.1%
Iritis > 30 days after surgery	12	5.5%
Persistent unresolved corneal edema (subset of corneal edema) > 30 days after surgery)	10	4.6%
Persistent vision-impairing corneal edema (subset of persistent unresolved corneal edema)	8	3.6%
Retinal detachment	0	0%
Retinal tear	0	0%
Subretinal hemorrhage	6	2.8%
Telescope dislocation	4	1.8%
Telescope removal	12	5.5%
Vitreous hemorrhage > 7 days after surgery	3	1.4%
Vitreous in anterior chamber > 7 days after surgery	5	2.3%
Other Adverse Events		
Anterior chamber inflammation > 30 days after surgery	7	3.2%
Anterior ischemic optic neuropathy	1	0.5%
Cyclitic membrane > 7 days after surgery	1	0.5%
Cystoid macular edema	1	0.5%
Diplopia	4	1.8%
Distorted pupil	11	5.1%
Dry eye	10	4.6%
Entropion	2	0.9%
Exposed suture	3	1.4%
Eye pain	3	1.4%
Flat anterior chamber > 21 days after surgery	1	0.5%
Floaters	3	1.4%
Focal striae	2	0.9%
Foreign body sensation	9	4.1%
Guttae	22	10.1%
Increased IOP requiring treatment > 7 days after surgery	8	3.7%
Inflammatory membrane	1	0.5%
Iridotomy > 7 days after surgery	3	1.4%
Iris transillumination defects > 21 days after surgery	12	5.5%
Obstructed iridectomy	1	0.5%
Ocular allergy	1	0.5%

TABLE 15
OCULAR ADVERSE EVENTS, OPERATED EYES (N=217)
STUDIES IMT-002 AND IMT-002-LTM

(CONTINUED)

Other Adverse Events		
Pigment epithelium around the peripheral iridectomy > 30 days after surgery	1	0.5%
Posterior synechiae	21	9.7%
Precipitates or deposits on intraocular telescope	71	32.7%
Ptosis	5	2.3%
Secondary glaucoma	2	0.9%
Subconjunctival hemorrhage	9	4.1%
Synechiae	1	0.5%
Tearing	1	0.5%
Visual disturbance	1	0.5%
Vitreous flare	1	0.5%
Zonular dehiscence > 7 days after surgery	1	0.5%

% = n/N ×100.

*Corneal edema reported in 13 intraocular telescope-implanted eyes and in 1 operated eye not implanted with an intraocular telescope

CORNEAL EDEMA

There were 14 (6.5%) intraocular telescope-implanted eyes with corneal edema >30 days after implantation surgery. There were 10 (4.6%) intraocular telescope-implanted eyes with persistent unresolved corneal edema at the last available visit. When ECD levels fall too low (< 750mm^2), the cornea may become edematous, thicken and lose transparency, and corneal transplantation may be needed. The endothelial cell density needed to maintain corneal transparency is unknown and varies from patient to patient.

PERSISTENT VISION-IMPAIRING CORNEAL EDEMA AND CORNEAL TRANSPLANTATION

Persistent vision-impairing corneal edema may require corneal transplant. There were 8 cases of persistent vision-impairing corneal edema in the study; 2 of these patients died without corneal transplant and 1 patient did not receive a transplant (reason unknown). Five (2.3%) study eyes underwent corneal transplantation in the IMT-002 and IMT-002-LTM studies. All 5 cases involved surgical complications at the time of intraocular telescope implantation. In 2 of the 5 cases, the intraocular telescope was removed during corneal transplantation procedure and replaced with an IOL. Visual acuity returned to baseline levels in these 2 patients. The intraocular telescope was left in place in the other 3 cases of corneal transplantation;

the initial improvement in visual acuity from the IMT-002 study was retained in these eyes.

CHOROIDAL NEOVASCULARIZATION

CNV was identified in one (1) eye in the IMT-002 study for an incidence of 0.5%, a rate consistent with that reported by Sunness et al., 1999.[xiv] An additional 4 cases of CNV were observed during the IMT-002-LTM study. These cases of CNV were successfully treated with thermal laser photocoagulation (Garfinkel et al, 2006)[xv], photodynamic therapy or intravitreal injection of anti-VEGF therapeutic agents.

DEVICE FAILURES, REMOVALS AND REPLACEMENTS – INTRAOPERATIVE AND POSTOPERATIVE

Table 16[xvi] summarizes the intraoperative and postoperative device failures, removals and replacements. Four device failures were reported in the IMT-002 study. Two of the intraocular telescope failures occurred during surgery and involved a broken haptic; one occurred before implantation and the device was not used, and one occurred during implantation, necessitating intraoperative replacement. The other 2 intraocular telescope failures involved condensation in the telescope portion of the device occurring one month postoperatively, resulting in device removal. No further device failures were reported over the course of follow-up through 5 years.

Intraoperatively, implantation of the intraocular telescope was attempted but unsuccessful in 6 eyes, as a result of surgical complications that included posterior capsule tear, zonular dehiscence, and choroidal hemorrhage (Table 16). A standard intraocular lens was placed in these eyes.

Postoperatively, the intraocular telescope was removed from 12 eyes. Eight (8) subjects requested removal of the intraocular telescope because they were dissatisfied with the device. As noted

[xiv] Sunness JS, Gonzalez-Baron J, Bressler NM, Hawkins B, Applegate CA. The development of choroidal neovascularization in eyes with the geographic atrophy form of age-related macular degeneration. Ophthalmol 1999;106:910-9.

[xv] Garfinkel RA, Berinstein DM, Frantz R. Treatment of choroidal neovascularization through the Implantable Miniature Telescope. Am J Ophthalmol 2006;141:766-67.

[xvi] The data presented are based on results from study IMT-002, a 24 month pivotal study of the IMT and study IMT-002-LTM, a study that followed IMT subjects to 60 months. Sixty-month data was collected and reported after the date of FDA approval.

above, the intraocular telescope was also removed from 2 eyes due to device failures and in 2 eyes that underwent corneal transplantation.

TABLE 16
INTRAOPERATIVE AND POSTOPERATIVE DEVICE FAILURES
REMOVALS AND REPLACEMENTS
STUDIES IMT-002 AND IMT-002-LTM

Intraoperative Removals (Number of Eyes)	
Broken Haptic	2*
Posterior Capsular Tear	4
Zonular Dehiscence	1
Choroidal Hemorrhage	1
Postoperative Removals Protocol IMT-002 and Protocol IMT-002-LTM (Number of Eyes)	
Condensation in the telescope portion of the intraocular telescope 1 month postoperatively	2
Dissatisfaction	8
Corneal Transplant	2

*1 broken haptic occurred before implantation

Table 17[xvii] provides ECD data for eyes that underwent postoperative intraocular telescope removal. In general, there was some ECD loss following intraocular telescope explanation, however there was considerable variability in the magnitude of loss. ECD loss was as high as 62%, but no lower than 13% in 6 eyes with data pre- and post-explantation.

TABLE 17
PREOPERATIVE & LAST AVAILABLE BCDVA AND ECD PRIOR TO &
POST INTRAOCULAR TELESCOPE REMOVAL EYES THAT UNDERWENT

[xvii] The data presented are based on results from study IMT-002, a 24 month pivotal study of the IMT and study IMT-002-LTM, a study that followed IMT subjects to 60 months. Sixty-month data was collected and reported after the date of FDA approval.

POSTOPERATIVE INTRAOCULAR TELESCOPE REMOVAL (N = 12), STUDIES IMT-002 AND IMT-002-LTM

PATIENT ID	MONTHS FROM DATE OF IMPLANT	PREOP BCDVA	LAST AVAILABLE BCDVA POST EXPLANT	ECD PRIOR TO EXPLANT CELLS/MM^2	ECD MOST RECENT VISIT POST EXPLANT CELLS/MM^2	COMMENTS
SUBJECT DISSATISFACTION						
001-XXX	31 Months	20/604	20/399	2544	1926	Patient dissatisfied
001-XXX	31 Months	20/551	20/726	1675	1454	Patient dissatisfied
004-XXX	22 Months	20/502	20/276	1772	666	Patient dissatisfied
008-XXX	10 Months	20/317	20/289	1625	1100	Patient dissatisfied
008-XXX	12 Months	20/219	20/240	2891	2199	Patient dissatisfied
010-XXX	12 Months	20/381	NAV	1858	NAV	Patient dissatisfied
012-XXX	19 Months	20/276	20/166	2408	1389	Patient dissatisfied
020-XXX	41 Months	20/200	NAV	2258	NAV	Patient dissatisfied
DEVICE FAILURE OR CORNEAL TRANSPLANT						
013-XXX	1 Month	20/348	NAV	2316	NAV	Device failure
023-XXX	1 Month	20/348	20/458	2529	1234	Device failure
013-XXX	12 Months	20/303	20/348	463	1264*	Corneal transplant
031-XXX	08/10/2004	20/551	20/1002	385	1857*	Corneal transplant

NAV = not available.
*Post-PKP ECD

OTHER SECONDARY SURGICAL INTERVENTIONS

Seven secondary surgical interventions not involving intraocular telescope removal were performed during the clinical studies. These procedures consisted of one YAG laser treatment of the anterior surface of the intraocular telescope to eliminate pigment deposits; 4 YAG laser peripheral iridotomies; one surgical repair of a distorted pupil; and one removal of a cortical fragment resulting from inadequate cataract removal.

EFFECTIVENESS RESULTS

Effectiveness results from the intraocular telescope clinical trials, protocol IMT-002, a pivotal study and protocol IMT-002-LTM, a long-term safety study in which patients implanted with the intraocular telescope under protocol IMT-002 were followed through 5 years, are discussed in this section.

The intraocular telescope improved visual acuity and quality of life in most patients with end-stage macular degeneration. The primary effectiveness endpoint, a 2-line or greater gain in either distance or near BCVA at 12 months in at least 50% of study patients, was met and exceeded. The secondary effectiveness endpoint, improvement in quality of life, was also achieved. The WA 2.7X device provided somewhat superior results as compared to the WA 2.2X, an outcome that would be expected given the higher magnification of this model.

VISUAL ACUITY PRIMARY ENDPOINT

Ninety percent (90%) of intraocular telescope-implanted eyes achieved at least a 2-line or greater gain in either distance or near BCVA at 12 months, thus exceeding the 50% criterion specified for the primary endpoint. This improvement was maintained at 24 months.

CHANGE IN BCDVA AT 12 AND 24 MONTHS

The mean change in best corrected distance visual acuity was more than a 3-line improvement from baseline at both one and two years. At 12 months, 66% of patients had a gain of 3 or more lines of BCDVA, and 45% had a gain of 4 or more lines. Change in BCDVA from baseline is shown in Table 18[xviii].

[xviii] The data presented are based on results from study IMT-002, a 24 month pivotal study of the IMT and study IMT-002-LTM, a study that followed IMT subjects to 60 months. Sixty-month data was collected and reported after the date of FDA approval.

TABLE 18
BCDVA CHANGE FROM BASELINE AND MEAN CHANGE
ALL INTRAOCULAR TELESCOPE-IMPLANTED EYES
STUDIES IMT-002 AND IMT-002-LTM

	12 Months	24 Months	36 Months	48 Months	60 Months
	n (%)	n (%)	n (%)	n (%)	n (%)
N	193	173	74	96	76
Gain ≥ 6 lines	21 (10.9%)	16 (9.2%)	2 (2.7%)	7 (7.3%)	5 (6.6%)
Gain ≥ 5 lines	49 (25.4%)	33 (19.1%)	11 (14.9%)	9 (9.4%)	9 (11.8%)
Gain ≥ 4 lines	87 (45.1%)	74 (42.8%)	26 (35.1%)	27 (28.1%)	21 (27.6%)
Gain ≥ 3 lines	128 (66.3%)	103 (59.5%)	39 (52.7%)	46 (47.9%)	36 (47.4%)
Gain ≥ 2 lines	155 (80.3%)	129 (74.6%)	51 (68.9%)	65 (67.7%)	47 (61.8%)
Gain ≥ 1 line	170 (88.1%)	146 (84.4%)	63 (85.1%)	75 (78.1%)	56 (73.7%)
No change	19 (9.8%)	24 (13.9%)	9 (12.2%)	17 (17.7%)	4 (5.3%)
Loss > 2 lines	4 (2.1%)	3 (1.7%)	2 (2.7%)	4 (4.2%)	4 (5.3%)
Loss > 3 lines	3 (1.6%)	1 (0.6%)	2 (2.7%)	4 (4.2%)	3 (3.9%)
Loss > 4 lines	2 (1.0%)	1 (0.6%)	1 (1.4%)	4 (4.2%)	2 (2.6%)
Loss > 5 lines	2 (1.0%)	1 (0.6%)	0 (0.0%)	2 (2.1%)	0 (0.0%)
Loss > 6 lines	1 (0.5%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Mean Change (SD)	3.43 lines (SD 2.31)	3.15 lines (SD 2.19)	2.74 lines (SD 2.17)	2.48 lines (SD 2.60)	2.41lines (SD 2.74)

N = number of non-missing BCDVA change from baseline.

As shown in Table 19, mean BCDVA improved from 20/312 at baseline to 20/141 at 12 months and to 20/149 at 24 months. Mean BCNVA at 8 inches improved from 20/315 at baseline to 20/181 at 12 months and to 20/190 at 24 months. Mean BCNVA at 16 inches improved from 20/262 at baseline to 20/149 at 12 months and to 20/157 at 24 months.

TABLE 19
MEAN BCVA AT BASELINE, 12 MONTHS AND 24 MONTHS
INTRAOCULAR TELESCOPE-IMPLANTED EYES, STUDY IMT-002

	Baseline		12 Months		24 Months	
	N	Mean	N	Mean	N	Mean
Mean BCDVA 95% CI	206	**20/312** (20/334, 20/291)	193	**20/141** (20/152, 20/131)	173	**20/149** (20/161, 20/138)
Mean BCNVA at 8" 95% CI	206	**20/315** (20/341, 20/291)	192	**20/181** (20/196, 20/167)	173	**20/190** (20/207, 20/174)
Mean BCNVA at 16" 95% CI	206	**20/262** (20/282, 20/244)	192	**20/149** (20/161, 20/138)	173	**20/157** (20/170, 20/145)

VISUAL ACUITY BY DEVICE MODEL

Improvements in BCDVA and BCNVA were achieved with both the WA 2.2X and WA 2.7X intraocular telescope models. A summary of improvement in visual acuity in terms of the primary effectiveness endpoint and percent of patients achieving at least a 2- and 3-line change are shown in Table 20.

TABLE 20
SUMMARY OF IMPROVEMENT IN VISUAL ACUITY
STRATIFIED BY INTRAOCULAR TELESCOPE MODEL, STUDY IMT-002

IMPROVEMENT IN VISUAL ACUITY	12 MONTHS		24 MONTHS	
	WA 2.2X	WA 2.7X	WA 2.2X	WA 2.7X
	% (n)	% (n)	% (n)	% (n)
≥2 LINES GAIN OF BCDVA *OR* BCNVA	89.0% (97)	91.6% (76)	84.5% (82)	88.2% (67)
BCDVA LINES GAINED				
≥3 LINES GAIN OF BCDVA	60.0% (66)	74.7% (62)	52.6% (51)	68.4% (52)
BCNVA LINES GAINED (8 OR 16 INCHES)				
≥3 LINES GAIN OF BCNVA	64.2% (70)	72.3% (60)	58.8% (57)	68.4% (52)

LONG-TERM VISUAL ACUITY

Long-term follow-up data demonstrates that mean BCDVA improvements were generally retained over time in intraocular

telescope-implanted eyes. There was a slight decline in BCDVA over time (Table 21[xix]).

TABLE 21
MEAN BCDVA AT BASELINE, 12, 24, 36, 48, AND 60 MONTHS
INTRAOCULAR TELESCOPE IMPLANTED EYES
STUDIES IMT-002 AND IMT-002-LTM

BCDVA	Baseline	12 Months	24 Months	36 Months	48 Months	60 Months
Overall						
N	206	193	173	74	96	76
Mean 95% CI	**20/312** (20/334, 20/291)	**20/141** (20/152, 20/131)	**20/149** (20/161, 20/138)	**20/156** (20/175, 20/139)	**20/171** (20/191, 20/152)	20/169 (20/193, 20/148)
WA 2.7X intraocular telescope						
N	91	83	76	29	37	32
Mean 95% CI	**20/326** (20/359, 20/297)	**20/127** (20/140, 20/115)	**20/141** (20/159, 20/125)	**20/157** (20/194, 20/127)	**20/170** (20/206, 20/140)	20/169 (20/211, 20/135)
WA 2.2X intraocular telescope						
N	115	110	97	45	59	44
Mean 95% CI	**20/301** (20/331, 20/273)	**20/152** (20/169, 20/136)	**20/155** (20/172, 20/140)	**20/155** (20/179, 20/134)	**20/171** (20/198, 20/148)	20/169 (20/200, 20/143)

QUALITY OF LIFE

Quality of life, as assessed by the National Eye Institute's (NEI) Visual Function Questionnaire-25 (VFQ-25), was a secondary outcome measure. The VFQ-25 is a validated version of the NEI VFQ which measures vision-targeted health status for persons with chronic eye diseases including macular degeneration. A 5 point difference in subscale and/or composite scores may be interpreted as clinically significant. The VFQ-25 survey was administered at baseline and postoperatively. As shown in Table 20, implantation with the intraocular telescope improved quality of life in this study population.

VFQ-25 RESULTS

Outcomes for all subscales of the VFQ-25 and the composite score are summarized in Table 22. At 12 months, the mean VFQ-25

[xix] The data presented are based on results from study IMT-002, a 24 month pivotal study of the IMT and study IMT-002-LTM, a study that followed IMT subjects to 60 months. Sixty-month data was collected and reported after the date of FDA approval.

composite score increased by a clinically significant amount (an increase of 6 points at 12 months). Overall, seven of the VFQ-25 subscales improved by clinically significant levels (general vision, near activities, distance activities, social functioning, mental health, role difficulties, and dependency). In subscales where no improvement or a decline in performance was expected (color vision, driving, and peripheral vision), performance was stable or declined. Also, the mean score of the general health subscale declined by 5 points, likely reflecting the impact of other health-related events on the non-vision related general health of the elderly study population.

TABLE 22
MEAN SCORE CHANGE AT 12 MONTHS
NEI 25-ITEM VISUAL FUNCTION QUESTIONNAIRE (VFQ-25)
INTRAOCULAR TELESCOPE IMPLANTED EYES
STUDY IMT-002

VFQ-25 Subscale	Preop Mean Score (95%CI) N = 206	12 Months Mean Score (95%CI) N = 193	Change from Preop Mean Score (95%CI) N = 193
General Vision	35.3 (33.2, 37.4)	50.3 (47.5, 53.1)	14.1 (11.0, 17.2)
Near Activities	25.5 (23.6, 27.5)	37.3 (34.6, 40.0)	11.2 (8.4, 13.9)
Distance Activities	34.3 (31.7, 36.8)	42.4 (39.1, 45.7)	7.9 (4.4, 11.4)
Color Vision	63.9 (60.1, 67.8)	67.7 (63.9, 71.5)	3.4 (-0.2, 6.9)
Social Functioning	49.3 (46.0, 52.7)	58.3 (55.1, 61.4)	8.6 (4.8, 12.4)
Mental Health	39.8 (36.5, 43.1)	49.3 (45.5, 53.0)	9.3 (6.1, 12.5)
Role Difficulties	37.4 (34.2, 40.7)	44.8 (41.0, 48.5)	7.3 (3.5, 11.0)
Dependency	37.7 (34.0, 41.4)	48.3 (44.4, 52.2)	10.0 (6.1, 13.9)
Ocular Pain	88.2 (86.0, 90.4)	88.5 (86.1, 90.9)	0.6 (-2.1, 3.3)
Driving	2.3 (1.0, 3.6)	1.9 (0.6, 3.2)	-0.5 (-1.6, 0.5)
Peripheral Vision	67.6 (63.9, 71.3)	62.9 (59.7, 66.1)	-5.9 (-10.4, -1.5)
Overall Composite	44.0 (42.1, 45.8)	50.3 (48.2, 52.4)	6.0 (4.0, 8.1)
General Health	64.0 (60.8, 67.1)	59.7 (56.4, 63.0)	-5.1 (-8.1, -2.0)

VFQ-25 scores on a scale of 0 (low) to 100 (maximum).
95%CI = 95% Confidence Interval.
General Health not included in Overall Composite per NEI VFQ-25 scoring guidelines.

The relationship between ≥ 2 line improvement in both distance and near best corrected visual acuity (BCVA) and VFQ-25 overall composite score is shown in Table 23. In subjects that experienced a 2-line or greater improvement in both distance and near BCVA, 141 of 193 subjects (73%), the VFQ-25 mean composite score

improved by a clinically significant 7.7 points at 12 months as compared to 2.4 points for subjects who did not experience that level of visual acuity improvement.

TABLE 23
RELATIONSHIP BETWEEN ≥ 2 LINE IMPROVEMENT IN BOTH DISTANCE AND NEAR BCVA IMPROVEMENT AND VFQ-25 SCORE COMPOSITE SCORE AT 12 MONTHS*
STUDY IMT-002

	N/%	Mean Change in Composite Score
≥ 2 line improvement in both distance and near BCVA	141(73%)	+7.7
< 2 line improvement in both distance and near BCVA	52 (27%)	+2.4

*Hudson, et al, Implantable Miniature Telescope for the Treatment of Visual Acuity Loss Resulting from End-Stage Age-Related Macular Degeneration: 1-Year Results, Ophthalmology, Vol 113, Number 11, 2006

Since a 5-point change in the VFQ-25 may be interpreted as clinically significant, change in VFQ-25 composite score at 12 month from baseline is summarized in Table 24. At 12 months, 51.8% (100/193) of patients gained at least 5 points, while 25.9% (50/193) of patients reported no change (i.e., change within ± 5 points), and 22.3% of patients (43/193) lost at least 5 points in VFQ-25 composite score from baseline.

TABLE 24
12-MONTH VFQ-25 OVERALL COMPOSITE SCORE CHANGE FROM BASELINE
INTRAOCULAR TELESCOPE-IMPLANTED EYES AT 12 MONTHS
STUDY IMT-002

Change in VFQ-25 Composite Score	**12 Months (N = 193)**	
	%	**n/N**
Subjects with increase ≥ 5 points	51.8%	100/193
Subjects with change between -5 and 5 points	25.9%	50/193
Subjects with decrease ≥ 5 points	22.3%	43/193

As shown in Table 25, in subjects that gained 2-lines or more in best corrected distance visual acuity (BCDVA), 56% reported a clinically significant improvement in NEI-VFQ overall composite score. In subjects that had a < 2-line improvement in BCDVA, 37% reported a clinically significant improvement in NEI-VFQ overall composite

score. 44% of subjects with a 2-line or more improvement in BCDVA did not report a clinically significant improvement in the overall composite score and 63% of subject that did not achieve a 2-line improvement in BCDVA did not report a clinically significant improvement in the overall composite score.

TABLE 25
RELATIONSHIP BETWEEN BCDVA CHANGE AND CLINICALLY SIGNIFICANT IMPROVEMENT IN VFQ OVERALL COMPOSITE SCORE AT 12 MONTHS
STUDY IMT-002

BCDVA Change from Baseline	VFQ Composite Score Change from Baseline		Total
	Clinically significant improvement (≥ 5 point increase)	No change or clinically significant decrease (< 5 point increase)	
≥2 line improvement	86/155 (55.5%)	69/155 (44.5%)	155/193 (80.3%)
<2 line improvement	14/38 (36.8%)	24/38 (63.2%)	38/193 (19.7%)
Total	100/193 (51.8%)	93/193 (48.2%)	193 (100%)

SUMMARY OF THE IMT- 002- LTME POST-APPROVAL STUDY

Study Purpose and Objective

The purpose of the IMT-002-LTME (Long-Term Monitoring Extension) (LTME) study was to provide additional long-term safety information for patients who participated in the IMT-002 study, the pivotal study of the intraocular telescope.

The objective of the LTME study was to calculate the incidence of ocular adverse events associated with intraocular telescope implant surgery in a cohort of patients who participated in the IMT-002 study to 8 years post-surgery.

Pre-specified events of interest were vision-impairing corneal edema (corneal edema leading to persistent loss of best-corrected distance visual acuity >2 lines from pre-surgery baseline level), corneal transplantation, retinal detachment, device explant, and device malfunction.

Study Design

Study LTME was a prospective, observational, cohort, open label, single group assignment safety study.

Study Population

Study sites that participated in and patients who enrolled in the IMT-002 study, including those who enrolled in the IMT-002-LTM trial, whether the telescope was successfully implanted or not, were invited to participate in study LTME. Individuals who did not participate in study IMT-002 were excluded.

Demographic and baseline characteristics of LTME and non-LTME were similar except for age. The age of LTME participants at time of IMT-002 enrollment was 73 years of age compared to 76 for non-LTME participants. The mean age of study LTME participants at the time of LTME enrollment was 81.

Data Source

Patient data was collected and recorded by study investigation sites, as required by the study protocol, at patient enrollment visits, scheduled study visits and interim patient reports or visits to investigation sites. The data was recorded on Case Report Forms (CRF), signed by the investigation site investigator at each examination and submitted to the study sponsor for quality assurance review, data entry into a study data base, and tabulation. Adverse events were reported on Adverse Event Forms (AEF). Adverse events reported by the patient or observed by the Investigator were recorded in the CRFs as well as on an AEF.

Clinical examinations conducted at study visits in both eyes were best-corrected distance visual acuity (BCDVA), slit lamp examination, indirect ophthalmoscopy, intraocular pressure and adverse events. Corneal endothelial cell density was measured only in the telescope implanted eye with non-contact specular microscopy.

Study data was maintained on a secure computer with appropriate data security provisions.

Key Study Endpoints

The objective of the LTME study was to calculate the incidence of ocular adverse events associated with the intraocular telescope implant surgery in a cohort of patients who participated in the IMT-002 study to 8 years post-surgery.

The number of adverse events and percentage of patients having any adverse event were to be tabulated and reported. Kaplan-Meier cumulative probabilities of adverse events showing the entire experience through 96 months for ocular adverse events of interest (vision-impairing corneal edema, corneal transplantation, retinal detachment, device explant, and device malfunction) as well as corneal endothelial cell density (ECD) < 1000 cells/mm2, ECD < 750 cell mm^2, and persistent best corrected distance visual acuity loss > 2 lines from pre-surgery baseline for telescope-implanted eyes and non-implanted fellow eyes were to be provided.

Total Number of Enrolled Study Sites and Subjects, Follow-up Rate

Twenty-eight investigation sites and 217 patients participated in the 24-month IMT-002 study. A cohort of 129 patients that participated in study IMT-002 enrolled in study IMT-002-LTM (LTM) at 25 participating sites and were followed to 5 years after intraocular telescope implantation. All IMT-002 study sites and patients were invited to participate in study LTME. Study LTME participants included 19 (68%) of 28 IMT-002 investigation sites and 51 (24%) of 217 patients that participated in study IMT-002. All sites and patients participating in study LTME also participated in study LTM. IMT-002 study sites identified that 58 (27%) patients had died prior to study LTME; 30 (14%) patients could not be reached by phone or registered mail; 46 (21%) patients refused participation primarily due to health reasons and travel limitations associated with advanced age; and 31(14%) patients were accounted for in the 9 sites that did not participate in study LTME.

Of the patients enrolled in the study, 94% were available for analysis at the 96-month visit. No patients were lost to follow-up.

Study Visits and Length of Follow-up

The schedule of visits was enrollment (only if the patient enrolled more than 3 months before or after the 84-month visit), 84-months and 96-months. Most participating patients had exceeded the 84-

month visit window at the time of study enrollment due to timing of the protocol approval.

SUMMARY OF THE POST- APPROVAL STUDY RESULTS[xx]

Final Safety Findings

During the LTME study, there were no reports of adverse events for the pre-specified adverse events of interest of persistent vision-impairing corneal edema, corneal transplantation, retinal detachment, device explant or device malfunction. There were 7 reports (14%) of best-corrected distance visual acuity (BCDVA) loss greater than 2 lines in telescope implanted eyes as compared to the IMT-002 pre-surgery baseline. These decreases in BCDVA were reported as device related in 3 (6%) subjects, unlikely to be related in 3 (6%) and not related in 1 (2%). There were 14 reports (29%) of BCDVA loss >2 lines in non-implanted fellow eyes during study LTME as compared to IMT-002 baseline, twice the number and percent of telescope-implanted eyes.

During study LTME there was 1 reported death and 1 reported stroke. Neither of these events were related to the telescope implant.

During site monitoring visits conducted by the study sponsor, LTME monitors identified that 2 patients had undergone telescope explant, a pre-specified adverse event of interest, approximately 6 to 7 years after telescope implantation. Additionally 2 patients were identified with vision-impairing corneal edema after LTM study exit and prior to LTME enrollment. Adverse event reports for these patients were included in LTME study cumulative probability calculations.

The estimated Kaplan-Meier cumulative probabilities for adverse events of interest in study LTME increased modestly or were unchanged over the period from 5 years to 8 years post telescope implantation. The cumulative number of vision-impairing corneal edema and device explant events increased by 2 for each of these AEs of interest. Eight years after telescope implantation the cumulative probability of vision-impairing corneal edema and device

[xx] The data presented are based on results from study IMT-002-LTME, a study that followed patients enrolled in study IMT-002 from 60 to 96 months. Data presented in this section also includes information from studies IMT-002, a pivotal 24 month study, and IMT-002-LTM, which followed patients enrolled in study IMT-002 from 24 to 60 months from telescope implantation. Sixty-month to 96-month data was collected and reported after the date of FDA approval.

explant was 11% for each of the AEs. For other adverse events of interest (corneal transplant, retinal detachment, and device malfunction) there were no new reports of adverse events, and 8 years after telescope implantation the cumulative probability of an adverse event was 4% for corneal transplant, 0% for retinal detachment, and 1% for device malfunction.

A modest increase was observed in the estimated Kaplan-Meier cumulative probability of corneal endothelial cell density (ECD) < 1000 cells/mm^2, increasing from 35 cumulative events, a 21% cumulative probability of occurrence at 5 years, to 36 events, a 23% cumulative probability, at 8 years. During the period from 5 to 8 years post telescope implantation, the cumulative number of reports of BCDVA loss >2 lines from IMT-002 baseline increased from 14 to 21 for telescope implanted eyes and from 31 to 38 for non-implanted fellow eyes. It should be noted the number of patients at risk in the tail (between 2,750 and 3,000 days after telescope implantation) of the Kaplan-Meier estimate is small, the variance in the estimate is large, and the reliability of the estimate is low.

As shown in Table 26 corneal endothelial cell density decreased from a 34% loss at 60 months post-surgery to a 41% loss at 96 months post-surgery. As shown in Table 27, over the 36-month period from 24 to 60 months after telescope implantation, estimated annual percent decrease in ECD was 4%. For the 36-month period 60 to 96 months, estimated annual percent decrease was 2%.

Table 26
Endothelial Cell Density and Percent Change from Pre-Surgery Baseline
LTME Study, Telescope-Implanted Eyes

	Preop	3 Months	12 Months	24 Months	36 Months	48 Months	60 Months	LTME Enroll-ment	84 Months	96 Months
ECD										
N	49	46	49	48	31	43	38	6	6	40
Mean (SD)	2451 (390)	2004 (534)	1813 (554)	1820 (620)	1710 (577)	1667 (570)	1622 (593)	1572 (339)	1330 (688)	1464 (493)
95% CI	2339, 2563	1845, 2162	1654, 1972	1640, 2000	1499, 1922	1492, 1843	1428, 1817	1216, 1927	608, 2053	1306, 1621
Median	2480	1988	1855	1885	1770	1702	1564	1477	1219	1383
Min, Max	1695, 3192	909, 2944	519, 2917	505, 2896	324, 2790	660, 2873	505, 2713	1322, 2224	593, 2595	517, 2742
ECD < 1000	0 (0%)	3 (7%)	5 (10%)	5 (10%)	3 (10%)	7 (16%)	5 (13%)	0 (0%)	2 (33%)	5 (13%)
ECD < 750	0 (0%)	0 (0%)	3 (6%)	4 (8%)	2 (6%)	4 (9%)	3 (8%)	0 (0%)	1 (17%)	3 (8%)

Table 26
Endothelial Cell Density and Percent Change from Pre-Surgery Baseline
LTME Study, Telescope-Implanted Eyes
(Continued)

	Preop	3 Months	12 Months	24 Months	36 Months	48 Months	60 Months	LTME Enroll-ment	84 Months	96 Months
Percent Change in ECD										
N		46	49	48	31	43	38	6	6	40
Mean (SD)		-19% (18%)	-26% (19%)	-26% (22%)	-30% (19%)	-33% (20%)	-34% (21%)	-38% (12%)	-47% (20%)	-41% (17%)
95% CI		-24%, -13%	-32%, -21%	-33%, -20%	-37%, -23%	-39%, -26%	-41%, -27%	-51%, -26%	-69%, -26%	-46%, -35%
Median		-12%	-24%	-24%	-28%	-32%	-35%	-40%	-48%	-41%
Min, Max		-63%, 9%	-77%, -1%	-76%, 28%	-82%, -2%	-75%, -4%	-81%, 2%	-50%, -21%	-68%, -12%	-80%, -11%

N = number of eyes with non-missing ECD data. Records after IMT explant or cornea transplant were excluded.

TABLE 27
CHANGE IN ENDOTHELIAL CELL DENSITY
LTME IMT-IMPLANTED EYES
(EXCLUDING RECORDS AFTER IMT REMOVAL FROM ANALYSES)

	Change from 24 to 60 Months	Change from 60 to 96 Months
Percent Change in ECD		
N	38	35
Mean (SD)	-13% (18%)	-6% (22%)
95% CI	-19%, -7%	-14%, 1%
Median	-13%	-6%
Min, Max	-60%, 14%	-63%, 79%
Estimated Annual Percent Change in ECD		
N	38	35
Mean (SD)	-4% (6%)	-2% (7%)
95% CI	-6%, -2%	-5%, 0%
Median	-4%	-2%
Min, Max	-20%, 5%	-21%, 26%

Estimated Annual Percent Change in ECD = Percent Change in ECD divided by the number of years in the intervals.
*Excludes records after IMT removal; ECD data prior to IMT removal for subject with IMT explantation are included in the analysis.

Final Effectiveness Findings

The objective of the LTME study was to calculate the incidence of ocular adverse events associated with the intraocular telescope implant surgery in a cohort of patients who participated in the IMT-002 study to 8 years post-surgery. Eight years after intraocular telescope implantation approximately 50% of the cohort of IMT-002 subjects participating in study LTME, individuals with moderate to profound permanent vision loss due to bilateral end-stage macular degeneration, continued to experience a clinically significant 2-line improvement in BCDVA as compared to IMT-002 baseline. Thirty-seven percent (37%) of telescope implanted subjects had a 3-line or greater improvement in BCDVA, a doubling of visual acuity and

20% had a 4-line or greater improvement. In untreated fellow eyes, only 11% had a 2-line improvement and 6% had a 3-line in BCDVA.

Study Strengths and Weaknesses

Study Strengths

Study LTME, a prospective, observational, cohort, open label, single group assignment safety study, followed a cohort of elderly patients with bilateral end-stage macular degeneration who participated in study IMT-002 to 8 years post telescope implant. The number and percent of IMT-002 investigation sites and patients participating in the study was 19 (68%) of 28 IMT-002 investigation sites and 51 (24%) of 217 patients. A cohort of patients that participated in IMT-002 enrolled in study LTM and was followed to 5 years after intraocular telescope implantation. All sites and patients participating in study LTME also participated in study LTM providing continuity of data for the participating cohort of patients.

Demographic and baseline characteristics of LTME and non-LTME participants were similar except for age. The age of LTME participants at time of IMT-002 enrollment was 73 years of age compared to 76 for non-LTME participants. The mean age of study LTME participants at the time of LTME enrollment was 81.
Of the patients enrolled in the study, 94% were available for analysis at the 96-month visit. No patients were lost to follow-up.

Study Weaknesses

Due to the advanced age of the study population at time of IMT-002 enrollment (mean age 76) and the attendant deaths, infirmities, and challenges of an elderly population, 24% of the IMT-002 patients enrolled in study LTM. By the time the LTME protocol was approved by FDA, most patients had exceeded the 84-month study visit window. Consequently, most of the study data obtained was at a single study visit, the 96-month visit.

ADVERSE EVENT REPORTING

Physicians are specifically requested to report to VisionCare and/or the Food and Drug Administration (FDA) any serious adverse events and potentially sight-threatening adverse events and complications that may reasonably be regarded as device-related. This information is requested to aid in identifying problems with the device. These problems may be related to a single device, a

specific lot of devices, or may be indicative of long-term problems associated with the intraocular telescope.

A serious adverse event is one that is life-threatening, results in permanent impairment of a body function or permanent damage to a body structure, or necessitates medical or surgical intervention to preclude permanent impairment of a body function or permanent damage to a body structure.

You may also report non-serious adverse events and complications.

When you report, please be prepared to give your name, the lot or serial number of the device, if possible (this can be found on the device case, the Tyvek® sterility barrier on the device package, or the patient registration card), a description of the adverse event or complication, whether the adverse event or complication required treatment and the results of the treatment, and information about how we can contact you if we need more information.

To report an adverse event to VisionCare, please call 1-408-872-9393. To report to FDA, please call FDA's MedWatch Adverse Event reporting program at 1-800-332-1088 or place the report online at www.fda.gov/medwatch/report.htm.

PHYSICIAN TRAINING PROGRAM

A surgeon training program has been developed to focus on the unique aspects of the intraocular telescope surgical procedure that differ from other intraocular implants. As outlined below, there are six components of the training program. Participation in two components, i.e., Physician-Led Training Session and the In-service Program, are required prior to implantation of the first intraocular telescope. The other components are optional and will be provided at the physician's request.

HOW SUPPLIED

The product is supplied sterile in several stiff package layers. The device in its immediate packaging is EtO sterilized and should be opened only under sterile conditions. Attached to the device is the Patient Implant Card, which shall be completed by the physician after implantation. This card must be given to the patient with instruction to keep it as a permanent record of the implant and to show the card to eye care practitioners seen in the future.

RECOMMENDED STORAGE AND TRANSPORTATION CONDITIONS

- Ambient temperature - 0° C to 43° C (32° F to 109° F)
- Relative humidity – 20% to 95%
- Barometric pressure – 0.5 atm to 1.2 atm (abs.)
- Illumination – Not specified
- Expiration date- specified on the package label.

Products not meeting the storage conditions specified in this document or damaged product packaging should not be used for clinical applications.

EXPIRATION DATE

The expiration date on the product package is the sterility expiration date. The device should not be implanted after the indicated sterility expiration date.

PATIENT REGISTRATION INSTRUCTIONS AND REPORTING REGISTRATION

Each patient who receives an intraocular telescope must be registered with VisionCare, Inc. at the time of device implantation. Registration is accomplished by completing the Patient Registration Card that is enclosed in the device package and mailing it to VisionCare.

A Patient Implant Card is supplied in the device package. This card must be given to the patient with instruction to keep it as a permanent record of the implant and to show the card to any eye care practitioner seen in the future.

RETURN/EXCHANGE POLICY

Please contact VisionCare Customer Service regarding device return or exchange. Due to device fragility, it is recommended to keep one spare implant in house.

Manufactured for and Distributed by:
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