POST MARKET STUDY
TO EVALUATE SAFETY AND EFFECTIVENESS OF THE INNFOCUS MICROSHUNT® (MIDI Arrow) IN PATIENTS WITH PRIMARY OPEN ANGLE GLAUCOMA

INN-007

Market Surveillance Protocol

Version 1.4 NL
Dated: Mar 9, 2015

SPONSOR:

InnFocus, Inc.
12415 SW 136 Avenue
Unit 3
Miami, Florida 33186, USA

Study Director:

PROTOCOL SYNOPSIS

Study Title:	Post Market Study to evaluate Safety and Effectiveness of the InnFocus MicroShunt® (MIDI Arrow) in patients with primary open angle glaucoma
Protocol number:	INN-007
Device:	InnFocus MicroShunt® ("MIDI Arrow")
Study design:	**Prospective, multicentric,** single arm post market study to gather safety and effectiveness data on the CE Marked InnFocus MicroShunt (MIDI Arrow) device in primary open angle glaucoma patients.
Study objectives:	The purpose of this study is to collect additional safety and effectiveness data on the InnFocus MicroShunt (MIDI Arrow) in subjects suffering from primary open angle glaucoma who are inadequately controlled on maximum tolerated medical therapy with intraocular pressure ≥ 18 mm Hg and ≤ 35 mm Hg and/or.where glaucoma progression warrants surgery.

Endpoints:

Primary effectiveness endpoint:

Reduction in intraocular pressure relative to the pre-operative value will be assessed at each post-operative visit (D1, D7, W4, M3, M6, M9, M12 and M24) with a first measurement of success at 12 months.

For patients with baseline IOP ≥18 to ≤21 mmHg, **success** will be measured as a patient who achieves an IOP reduction of 20% or greater with no reoperation for glaucoma or loss of light perception vision.
For patients with baseline IOP >21 mmHg, **success** will be measured as a patient with IOP<21 mmHg and IOP reduction from baseline of 20% or greater with no reoperation for glaucoma or loss of light perception vision.

Complete success is a patient who is not on supplemental medical therapy to obtain controlled levels of intraocular pressure.
Qualified success is defined as a patient who requires supplemental medical therapy to maintain controlled levels of intraocular pressure.

A reoperation to better the aqueous drainage like a trabeculectomy or an implantation of another drainage implant is considered a **failure** as it does not fulfill the criteria for success mentioned above. Needling of the bleb or post-surgical injection of an anti-fibrotic are **not considered failures**.

Secondary effectiveness endpoint:

New measurement of success at 24 months.
Level of glaucoma supplemental medical therapy at M12 and M24.

Primary safety endpoint :

Incidence of all device and/or procedure-related Adverse Events during the study.

Secondary safety endpoints:

Incidence of all Adverse Events reported during the study.

Number of centers: Up to four (4) study centers in two (2) countries (France-Switzerland).

Patient population: **100 subjects with** a goal of 25 subjects at each selected center. These patients will be phakic or pseudophakic and will have had no prior incisional glaucoma surgery and will undergo InnFocus MicroShunt surgery only.

Inclusion criteria:

1) Male or female, age 18 to 85 years, inclusive.
2) Subject has mild to moderate primary open glaucoma where the IOP is not adequately controlled on maximum tolerated medical therapy and has intraocular pressure greater than or equal to 18mmHg and less than or equal to 35mmHg while on glaucoma medications and/or.where glaucoma progression warrants surgery..
3) Primary open angle glaucoma diagnosis based on:

a. glaucomatous optic nerve damage as evidenced by any of the following optic disc or retinal nerve fiber layer structural abnormalities documented on slit lamp stereo biomicroscopy or in stereo disc photos:
   1. Diffuse thinning, focal narrowing, or notching of the optic disc rim, especially at the inferior or superior poles.
   2. Localized abnormalities of the peripapillary retinal nerve fiber layer, especially at the inferior or superior poles.
   3. Optic disc neural rim asymmetry of the two eyes consistent with loss of neural tissue.
   4. Disc rim or peripapillary retinal nerve fiber layer hemorrhages.

4) Subject willing to comply with study requirements.
5) Subject who has signed an approved informed consent form.

Exclusion criteria:

All criteria apply to the study eye unless otherwise noted

1) Patient unwilling or unable to give informed consent, or unable to return for scheduled protocol visits through 2 years.
2) Patient < 18 years or >85 years of age.
3) Patient is pregnant or nursing or unable to use appropriate birth control.
4) Vision level of no light perception.
5) Active iris neovascularization, active proliferative retinopathy or other ophthalmic disease that could confound study results.
6) Iridocorneal endothelial syndrome.
7) Epithelial or fibrous downgrowth.
8) Secondary glaucoma such as post-trauma
9) Chronic ocular inflammatory disease.
10) Subject already enrolled in this or another study (only one eye can participate in this study) or completed their participation in another study within 30 calendar days of the screening exam.
11) Aphakia.
12) Vitreous in the anterior chamber.
13) Inability to obtain accurate IOP measurement throughout the study. For example: a history of corneal surgery, corneal opacities or disease/pathology (Active corneal infection or Fuchs dystrophy are examples.).
14) Prior ALT, SLT or MLT within 90 days of enrollment.
15) Severe anterior or posterior blepharitis.
16) Unwilling to discontinue contact lens use after surgery.

17) Previous incisional ophthalmic surgery, excluding uncomplicated clear corneal phacoemulsification (cataract) surgery at least 6 months prior to enrollment.
18) Presence of an anterior chamber IOL (AC-IOL).
19) Prior laser peripheral iridotomy.
20) Need for glaucoma surgery combined with other ocular procedures or anticipated need for additional ocular surgery during the investigational period.
21) Fellow eye with poorer than 20/200 best-corrected visual acuity (BCVA)
22) Known allergy or other contraindication to Mitomycin C (MMC) drug.
23) Angle closure glaucoma or narrow anatomical chamber angle as identified by gonioscopy and classified as Shaffer Grade 0 or 1.
24) Any condition that prevents the investigational device implantation or trabeculectomy in the superior region of the study eye (e.g., peripheral anterior synechiae, scleral staphyloma or conjunctival scarring).
25) Diagnosed degenerative visual disorders not associated with existing glaucoma condition (e.g., advanced dry or wet macular degeneration or other retinal disorders, central retinal artery or vein occlusion) or choroidopathy (e.g., choroidal detachment, effusion, choroiditis, or neovascularization).
26) Central corneal thickness that is less than 450 microns or greater than 620 microns.
27) Previous cyclodestructive procedure.
28) Prior retinal laser procedure conducted for any purpose other than treatment of retinal tear or hole.
29) Conditions associated with elevated episcleral venous pressure such as active thyroid orbitopathy, cavernous sinus fistula, Sturge-Weber syndrome, orbital tumors, orbital congestive disease.
30) Clinically significant sequelae from trauma (e.g., chemical burns, blunt trauma, etc.)
31) Ocular pathology or medical condition for which, in the investigator's judgment, the following factors would either place the subject at increased risk of complications or contraindicate device implantation or interfere with compliance to elements of the study protocol (e.g., ophthalmic examinations, follow-up visits),
    a. inability to reliably complete visual field testing over the course of the study,
    b. uncontrolled systemic disease (e.g. diabetes, hypertension) that could compromise their participation in the study.
    c. Disorders that pose a fall risk, as well as compromise ability to take a visual field exam and take glaucoma medications (e.g., Parkinson's disease),

d. inability to discontinue use of blood thinners within the surgeon's standard preoperative or postoperative instructions.
e. immunodeficiency concerns.
f. known corticosteroid responders whose pressure increases would not allow them to withstand the postop corticosteroid regimen.

32) Intraocular silicone oil.
33) Ocular steroid use in the planned study eye or systemic steroid use anytime within three months of the procedure. (This would not include the use of inhaled or dermatologic steroids.)
34) Chemotherapy within six months of the screening visit.
35) Use of oral hypotensive glaucoma medications for treatment of the fellow eye.
36) A requirement of general anesthesia for the procedure.
37) Bacterial conjunctivitis
38) Bacterial corneal ulcers
39) Endophthalmitis
40) Orbital cellulitis
41) Bacteremia or septicemia
42) Active scleritis
43) Uveitis
44) Severe dry eye syndrome
45) Severe myopia
46) Pseudo-exfoliative glaucoma

Statistical analysis: One sample bilateral chi-square test at the 5% level, exact bilateral 95% confidence intervals. All results will be presented in a tabular format and with figures, as appropriate.

Study duration: The overall duration of the study will be approximately 36 months. It is estimated that the inclusion period will be up to 12 months. Each patient will be followed-up for 24 months following implantation of the device.

Schedule of tests to be performed:

	Patient History	Informed consent	Inclusion/Exclusion criteria	Pachymetry	Pregnancy test[a]	Visual Acuity	Slit Lamp	Seidel Test	Tonometry	Motility evaluation	Gonioscopy	Ophthalmoscopy	Perimetry
Qualifying Assessment and Preop - Baseline	x	x	x	x	x	x	x		x	x	x	x	x
Day 0 - Procedure													
Day 1						x	x	x	x			x	
Day 7						x	x	x	x			x	
4 Weeks						x	x	x	x			x	
Month 3						x	x	x	x			x	
Month 6						x	x	x	x	x		x	
Month 9						x	x	x	x			x	
Month 12						x	x	x	x	x		x	x
Month 24						x	x	x	x	x		x	x

[a] for non-menopausal women

Study inclusion period: 12 months
Study duration for each subject: 24 months
Total duration of the study: 36 months

Acceptable Visit Windows

Day 0: Operative Day
Day 1: ± 0 day
Day 7: ± 1 day
4 weeks: ± 2 days
Month 3: ± 1 week
Month 6: ± 1 week
Month 9: ± 2 weeks
Month 12: ± 2 weeks
Month 24: ± 2 weeks

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ABBREVIATIONS

AC-IOL	Anterior chamber intraocular lens
ADE	Adverse device effect
AE	Adverse event
CACG	Chronic angle closure glaucoma
CAI	Carbonic anhydrase inhibitor
CE	Cataract extraction
CRF:	Case report form
DM :	Diabetes mellitus
ECCE :	Extracapsular cataract extraction
GCP:	Good clinical practice
GDI:	Glaucoma drainage implant
ICCE :	Intracapsular cataract extraction
HTN :	Arterial Hypertension
LTP :	Laser trabeculoplasty
LPI :	Laser peripheral iridotomy
MMC :	Mitomycin C
PCIOL :	Posterior chamber intraocular lens
PG :	Prostaglandin analogue
POAG :	Primary open angle glaucoma
PXF :	Pseudo-exfoliative glaucoma
Trab :	Trabeculectomy
SADE:	Serious adverse device effect
SAE:	Serious adverse event
UADE:	Unanticipated adverse device effect
USADE	Unanticipated serious adverse device effect
WHO:	World Health Organization

1. GENERAL INFORMATION / STUDY ADMINISTRATIVE STRUCTURE

Principal Investigator: A separate list of principal investigators in the study will be maintained.

Sponsor: InnFocus, Inc.
12415 SW 136 Avenue, Unit 3
Miami Florida 33186
USA

Study Director: [redacted]

Authorized Representative: [redacted]

Monitor: [redacted]

2. INTRODUCTION

2.1 Justification for the study

Aqueous humor drainage surgery to control intraocular pressure (IOP) by the implantation of different devices has been used with limited success due to a buildup of fibrous extracellular matrix.[1;2] The initial devices used to drain aqueous humor from the anterior chamber were pieces of horse-hair threads[3]; however, they failed due to fibrotic reactions to the material. Other materials including glass rods[4], gold[5], silk[6] were tried without success due to uncontrollable fibrosis and scarring in the subconjunctival space.

Modern glaucoma drainage surgery began with the pioneer work of Molteno in rabbits[7] that was extrapolated to humans[8], where the aqueous humor was drained from the anterior chamber by a silicone tube to a polyethylene plate adjacent to the limbus. He modified his original design by increasing the tube length to allow the drainage of aqueous humor into a more posterior area, thereby decreasing the rate of extrusion[9]. Other major modifications in the design of glaucoma drainage implants were the introduction of unidirectional valve systems to avoid the complications associated with postoperative hypotony; however, recent studies have questioned the functionality of these implants[10]. Krupin et al reported his results with a valved system made of silicone rubber in 1976[11] and the clinical results with the Ahmed implant followed years later[12]. Subsequent designs by Molteno[13] and Baerveldt[14;15] were aimed at increasing the plate surface area in order to enhance the reduction in intraocular pressure.

Novel devices without plates have been receiving much attention in the literature lately and include 1) the "T Mesh" made of expanded polytetrafluoroethylene[16,17], 2) hydroxyapatite tubes[18], 3) stainless steel devices such as the Ex-PRESS® Miniature Glaucoma Drainage Implant[19], and 4) the Wilcox aqueous shunt.[20] Long-term effectiveness of these devices is not established, but the recent results for the Ex-PRESS are indicative of success[50;51].

Practice patterns vary in the surgical management of glaucoma. An anonymous survey of members of the American Glaucoma Society (AGS) and Japanese Glaucoma Society (JGS) by Chen and associates in 1996 presented ten clinical situations requiring glaucoma surgical intervention[21]. The majority of respondents preferred trabeculectomy with Mitomycin C (MMC) for all clinical situations provided (51% to 87%), although many of those surveyed elected to use a glaucoma drainage implant (GDI), trabeculectomy with 5-fluoroacil (5-FU), or trabeculectomy without an antifibrotic agent. A follow-up study by Joshi and associates in 2002 re-administered the same survey to members of AGS. Respondents continued to report a preference for trabeculectomy with MMC in the ten clinical situations, but the percentage usage of GDIs had significantly increased[22]. In particular, selection of GDIs as the preferred surgical approach in eyes with a previous trabeculectomy increased from 7% to 20%, and in eyes with previous extracapsular or intracapsular cataract surgery increased from 8% to 22%.

The lack of consensus among glaucoma surgeons regarding use of a GDI or trabeculectomy with an anti-fibrotic agent in eyes that have had previous cataract extraction or failed filtering surgery likely relates to the fact that available clinical data has not shown one surgical procedure to be superior to the other. Surgical results reported in case series with GDIs and 5-FU and MMC trabeculectomies in aphakic/pseudophakic eyes have shown success rates ranging from 50% to 88% for GDIs[23-33], and 48% to 86% for filtering surgery with an antifibrotic agent[34,35] in aphakic/pseudophakic eyes. Surgical results in eyes with failed filters ranged from 44% to 88% for GDIs[23,25,27,28,30,31], and 61% to 100% for 5-FU and MMC trabeculectomies[34,35,36-39,41-44]. There are obvious difficulties in making comparisons between case series, given differences in study populations, follow-up periods, and criteria by which success is defined. However, comparable success rates have been reported with both GDIs and filtering surgery with an anti-

fibrotic agent in eyes that have undergone prior cataract surgery or failed filtering surgery when each procedure has been studied separately. GDIs (Baerveldt, Ahmed, etc.) and the frequency of this procedure are increasing relative to trabeculectomies as recent publications [46-49] suggest that they perform better in the long-term.

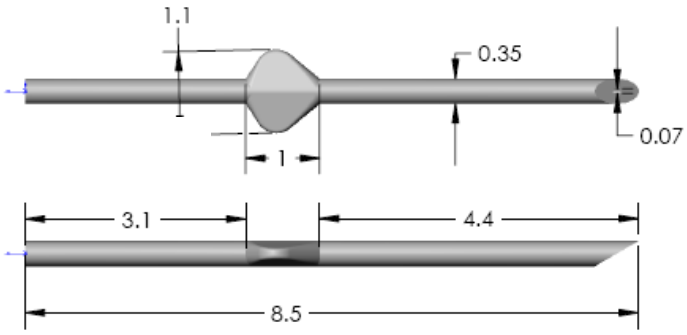
Although different factors are important in determining the surgical success, it is believed that the fibrotic and inflammatory reactions induced by different biomaterials and contaminants and cleavable moieties that may elute therefrom, used in the manufacture of the GDI is a major determinant of success in glaucoma drainage surgery.[36,37,45] Other factors related to the design of the implant such as shape, flexibility, modulus and texture could also be associated with erosion, extrusion, inflammation and scarring[22]. Selecting a biomaterial and a design that produces a minimal inflammatory reaction with virtually no encapsulation or fibrotic reaction is a means to increase the success rate of these procedures. The material used for the InnFocus MicroShunt for this post market study, SIBS, was selected due to its biostability, biocompatibility, and lack of cleavable side groups as well as its low modulus of elasticity (less than 0.9 MPa at 100% elongation). The result of the combination of SIBS as a material and the change in geometry of the tube (smaller inside and outside diameter) should provide little or none of the encapsulation that has resulted in closure of existing commercialized devices over time and the new geometry will better control the flow of aqueous out of the anterior chamber to prevent hypotony (a flat anterior chamber). In addition, the elasticity of the SIBS should prevent the erosion of the conjunctiva caused by other GDIs.

The InnFocus, Inc. InnFocus MicroShunt glaucoma drainage device has undergone extensive pre-clinical and clinical testing and a CE Mark was granted in January 25, 2012. As part of the continuing efforts to evaluate performance and safety, a market surveillance program is being initiated at several institutions in Europe. This will result in the device being used by numerous surgeons and will provide an expanded understanding of ease of implantation, surgical success of the device, and relative success in a larger cross-section of patients who have glaucoma.

2.2 The InnFocus MicroShunt Configuration

The material of construction for the InnFocus MicroShunt is poly (styrene-b-isobutylene-b-styrene) called SIBS. The outside diameter of the tube is approximately 350 microns with a nominal length of 8.5 mm. The inside diameter of the tube is 70 microns. The arrow tab is about 1mm in width and same thickness as the tube.

InnFocus MicroShunt
(All dimensions in mm)



2.3 Summary of pre-clinical testing

2.3.1 Materials

The material of construction for the InnFocus MicroShunt, poly (styrene-b-isobutylene-b-styrene) called SIBS, is presently being used in another commercialized (CE marked and FDA approved) medical device, the Taxus® drug-eluting coronary stent. The SIBS is the coating material on the stent that releases the drug over a period of time. The material has undergone a comprehensive biocompatibility screen and passed prior to its use in humans. Furthermore, two year data from explanted stents has shown that the SIBS exhibits no degradation over that period of time.

2.3.2 Prior clinical studies and regulatory status

The one year results of clinical studies have demonstrated IOP reduction that is comparable or better than trabeculectomy or competitive glaucoma drainage devices. A discussion of the complications is contained in the risks section that follows and supports that the risks are comparable or better than trabeculectomy and competitive glaucoma drainage devices. The InnFocus MicroShunt was CE marked in January 25, 2012. In its review for CE marking the notified body has approved the instructions for use.

2.3.3 Histology

Histology conducted on InnFocus MicroShunt explanted from the eyes of rabbits has shown excellent healing without the presence of myofibroblasts.

2.4 Risk analysis

2.4.1 Benefits

The InnFocus MicroShunt is intended to decrease the intraocular pressure in the eye caused by glaucoma to a normal level that aids in managing the long term effects of the disease. In the majority of cases, the normal pressure range is from 6 mmHg to 21 mmHg, although there are cases in which the disease can be detrimental with pressures in the normal range. At the same time, the InnFocus MicroShunt has been designed to minimize the most common and feared immediate postoperative complication; hypotony. Low IOP is associated with shallow and flat anterior chambers, choroidal effusions and detachment, and corneal decompensation that jeopardize vision. The new glaucoma drainage implant was designed with a small lumen diameter of approximately 70 μm to avoid the excessive postoperative outflow that may occur with current drainage devices in the immediate postoperative period. The use of a tube with a 70 μm lumen was calculated from the well-known Hagen-Poiseulle equation[40] which relates flow rate into the eye, and therefore out of the eye, with pressure, diameter and length of the outflow tube (the GDI), and adjusted based on experience in animal studies. It is noteworthy to mention that current drainage devices made with a silicone tube and a connecting reservoir, have approximately 300 μm of lumen diameter.

2.4.2 Risks

a. **The cornea or iris could be damaged during the implantation procedure or post implantation.** Based on prior clinical data, no cornea or iris damage has been observed although occasionally the device has made direct contact with the iris. Additionally, surgeons are instructed on the proper insertion method. This potential contact risk with the iris or cornea is similar to presently commercialized aqueous shunts (Ahmed, Baerveldt, Molteno) as they require placement of the proximal end of the tube in the same location as the InnFocus MicroShunt.

b. **The device may not be inserted completely into the anterior chamber.** If this occurs, the device may be relocated to a different access tract or another device may be implanted. In either case, this would result in an overall longer procedure. There has only been one case with the present device in which a second insertion location adjacent to the original location

was required with the same device with a corresponding longer procedure time. No other complications were observed.

c. **The device could clog if it remains in contact with the iris with resultant low flow and increased IOP**. Although contact with the iris has been observed with the present device, flow has been maintained. If the tip does become clogged, the physician can use a standard laser to remove the iris material from the tip of the device. This risk is also present with the proximal end of aqueous shunts which can contact the iris or cornea and lasers are routinely used to clear debris from the proximal end.
d. **The bleb that is typically created by the aqueous flow into the Tenon/sub-conjunctival pocket may develop excessive scarring** (bleb encapsulation or also called "Tenon's cyst") **which can result in lower aqueous flow through the bleb and increased IOP.** The implantation procedure has been refined to provide for a large pocket that is resistant to fibrosis and scarring. One bleb encapsulation was observed in prior InnFocus MicroShunt studies and was successfully needled. A similar risk of scarring is observed with trabeculectomy.
e. **Choroidal effusion may occur and lead to an observable choroidal detachment.** This has been observed in 2 prior InnFocus MicroShunt cases during combined surgery with cataract removal and resolved with the use of cycloplegics. There was no incidence of suprachoroidal hemorrhage in studies to date but this should be considered a risk of this surgery, as it is with trabeculectomy.
f. **Flat or shallow chambers may occur as the result of low pressure in the anterior chamber.** Two cases of shallow chambers were observed in studies to date and resolved spontaneously with no observable damage to the cornea or iris.
g. **Wound leaks may occur shortly after surgery and may be related to the suturing of the conjunctiva to the limbus.** One short term wound leak was observed but resolved spontaneously within the first three weeks after surgery. No long term wound leaks have been observed in existing studies of this device.
h. No **blebitis** has been observed in clinical studies to date but is a risk whenever a bleb is developed as a result of the surgery.
i. No **endophthalmitis** has been observed but it is a risk of this type of surgery, especially in the event that blebitis develops.
j. **Hyphema** has been observed in several cases but not at a level of 10% or more of the anterior chamber and typically resolves within one week of surgery.
k. **Aqueous misdirection is a potential risk of filtering surgery** but has not been observed in existing studies of the device.

l. **Decompression retinopathy** has not been observed but remains a risk with this type of surgery.
m. **Persistent hypotony** is defined as an intraocular pressure below 6mm that is present on two consecutive follow-ups after three months. This can lead to hypotony maculopathy. No persistent hypotony or hypotony maculopathy have been observed in studies to date.
n. **Corneal decompensation from MMC exposure** could occur if MMC reached the corneal endothelium as has been reported in an animal model in the literature and is another risk. Avoiding contact of MMC with the cornea endothelium by rinsing MMC out of the subconjunctival pocket prior to entry of the needle into the AC should assure no entry of MMC and therefore no effect on the endothelium. Corneal decompensation has not been observed in InnFocus MicroShunt clinical studies to date.
o. **A thin-walled avascular bleb may be associated with low IOP.** This has not been observed in the prior InnFocus MicroShunt studies.
p. **Tube erosion over time resulting in a break in the conjunctival barrier and potential infection** is a risk in the InnFocus MicroShunt arm of the study. There have been no tube erosions in the ongoing studies of the InnFocus MicroShunt.
q. **Chronic or recurrent iritis** is a risk associated with filtering surgery. No chronic or recurrent iritis has been observed in the ongoing InnFocus MicroShunt clinical studies.
r. **Tube obstruction** is a risk with the InnFocus MicroShunt procedure. There has been one transient tube obstruction from fibrin in a combined InnFocus MicroShunt implantation and cataract surgery in an ongoing study that was resolved with a flush of the AC end of the tube during the initial surgery. Viscoelastics have not been tested with this device. However, in an emergency when all other therapies have failed, the use of hydroxyl methyl-cellulose (HPMC) may be an option. Use of HPMC should be a last resort to correct a flat chamber with the InnFocus MicroShunt and may risk loss of flow through the device for one or more weeks after use necessitating close or more frequent observation of IOP. There have been no cases of the need to use viscoelastics to correct flat chamber to date.
s. **Migration of device out of anterior chamber.** There have been no cases of InnFocus MicroShunt migration out of the anterior chamber, but there has been one case where the surgeon inadvertently moved the InnFocus MicroShunt out of the anterior chamber during conjunctival closure at time of the original procedure.

2.4.3 Risk/Benefit Summary

The overall benefit of the InnFocus MicroShunt Glaucoma Implant outweighs its residual risks. Efficacy results compare well with trabeculectomy and competitive glaucoma drainage devices, while complications are equivalent or better. As compared to alternatives, the procedure itself is easier and the procedure time is less.

2.5 Conformity

The study will be performed in accordance with the European Directive 93/42/EEC, and the standard EN ISO 14155:2011 on clinical investigations with medical devices for human subjects – good clinical practice, the MEDDEV 2.12-1 (Medical devices vigilance system), Meddev 2.7/1, the MEDDEV 2.12/2 revision 2 (Post market clinical follow-up studies), and recommendations guiding physicians in biomedical research involving human subjects adopted by the 18th World Medical Assembly, Helsinki, Finland, 1964 and later revisions.

In the Netherlands this study will also be performed in accordance with the Medical Research Involving Human Subjects Act (WMO).

3. STUDY OBJECTIVES

Objectives

The purpose of this study is to collect additional safety and effectiveness of the InnFocus MicroShunt (MIDI Arrow) in subjects suffering from primary open angle glaucoma that are inadequately controlled on maximum tolerated medical therapy with intraocular pressure ≥ 18 mm Hg and ≤ 35 mm Hg and/or.where glaucoma progression warrants surgery.

Primary effectiveness endpoint:

Reduction in intraocular pressure relative to the pre-operative value will be assessed at each post-operative visit (D1, D7, W4, M3, M6, M9, M12 and M24) with a first measurement of success at 12 months.

For patients with baseline IOP ≥18 to ≤ 21 mmHg, **success** will be measured as a patient who achieves an IOP reduction of 20% or greater with no reoperation for glaucoma or loss of light perception vision.
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Complete success is a patient who is not on supplemental medical therapy to obtain controlled levels of intraocular pressure.
Qualified success is defined as a patient who requires supplemental medical therapy to maintain controlled levels of intraocular pressure.

A reoperation to better the aqueous drainage like a trabeculectomy or an implantation of another drainage implant is considered a **failure** as it does not fulfill the criteria for success mentioned above. Needling of the bleb or post-surgical injection of an anti-fibrotic are not considered failures.

Secondary effectiveness endpoint:

New measurement of success at 24 months.
Level of glaucoma supplemental medical therapy at M12 and M24.

Primary safety endpoint :

Incidence of all device and/or procedure-related Adverse Events during the study.

Secondary safety endpoints:

Incidence of all Adverse Events reported during the study.

4. STUDY DESIGN

This is a prospective, multicentric, single arm post-market study with a CE marked device conducted at up to 4 European locations (France, Switzerland, Spain and the Netherlands) in which each patient meeting the inclusion criteria and not excluded per the exclusion criteria will be implanted with a InnFocus MicroShunt in the anterior chamber of the eye. Patients will be followed for 24 months with an expected enrollment period of up to 12 months. Safety of the InnFocus MicroShunt will be confirmed with indirect and direct microscopic evaluation of the implanted and non-implanted eyes pre and post operatively, and at defined follow-up intervals for hypotony, inflammation, infection, migration of the shunt, visual acuity, as well as a number of other defined potential complications. The effectiveness of the shunt will be evaluated by measurement of intraocular pressure at defined intervals.

5. PATIENT POPULATION

The number of patients in the study at each site is planned for ≤ twenty (20). The patient population will include male or female patients of ages 18 to 85 years, inclusive, with glaucoma

that is inadequately controlled on maximum tolerated medical therapy, with intraocular pressure ≥ 18 mm Hg and ≤ 35 mm Hg.

6. SELECTION OF PATIENTS

Inclusion criteria:

1) Male or female, age 18 to 85 years, inclusive.
2) Subject has mild to moderate primary open glaucoma where the IOP is not adequately controlled on maximum tolerated medical therapy and has intraocular pressure greater than or equal to 18mmHg and less than or equal to 35mmHg while on glaucoma medications and/or.where glaucoma progression warrants surgery.
3) Primary open angle glaucoma diagnosis based on:
   a. glaucomatous optic nerve damage as evidenced by any of the following optic disc or retinal nerve fiber layer structural abnormalities documented on slit lamp stereo biomicroscopy or in stereo disc photos:
      1. Diffuse thinning, focal narrowing, or notching of the optic disc rim, especially at the inferior or superior poles.
      2. Localized abnormalities of the peripapillary retinal nerve fiber layer, especially at the inferior or superior poles.
      3. Optic disc neural rim asymmetry of the two eyes consistent with loss of neural tissue.
      4. Disc rim or peripapillary retinal nerve fiber layer hemorrhages.
4) Subject willing to comply with study requirements.
5) Subject who has signed an approved informed consent form.

Exclusion criteria:

All criteria apply to the study eye unless otherwise noted.

1) Patient unwilling or unable to give informed consent, , or unable to return for scheduled protocol visits through 2 years.
2) Patient < 18 years or >85 years of age.
3) Patient is pregnant or nursing or unable to use appropriate birth control.
4) Vision level of no light perception.
5) Active iris neovascularization, active proliferative retinopathy or other ophthalmic disease that could confound study results.
6) Iridocorneal endothelial syndrome.
7) Epithelial or fibrous downgrowth.
8) Secondary glaucoma such as post-trauma

9) Chronic ocular inflammatory disease.
10) Subject already enrolled in this or another study (only one eye can participate in this study) or completed their participation in another study within 30 calendar days of the screening exam.
11) Aphakia.
12) Vitreous in the anterior chamber.
13) Inability to obtain accurate IOP measurement throughout the study. For example: a history of corneal surgery, corneal opacities or disease/pathology. (Active corneal infection or Fuchs dystrophy are examples.).
14) Prior ALT, SLT or MLT within 90 days of enrollment.
15) Severe anterior or posterior blepharitis.
16) Unwilling to discontinue contact lens use after surgery.
17) Previous incisional ophthalmic surgery, excluding uncomplicated clear corneal phacoemulsification (cataract) surgery at least 6 months prior to enrollment.
18) Presence of an anterior chamber IOL (ACIOL).
19) Prior laser peripheral iridotomy.
20) Need for glaucoma surgery combined with other ocular procedures or anticipated need for additional ocular surgery during the investigational period.
21) Fellow eye with poorer than 20/200 best-corrected visual acuity (BCVA).
22) Known allergy or other contraindication to Mitomycin C (MMC) drug.
23) Angle closure glaucoma or narrow anatomical chamber angle as identified by gonioscopy and classified as Shaffer Grade 0 or 1.
24) Any condition that prevents the investigational device implantation or trabeculectomy in the superior region of the study eye (e.g., peripheral anterior synechiae, scleral staphyloma or conjunctival scarring).
25) Diagnosed degenerative visual disorders not associated with existing glaucoma condition (e.g., advanced dry or wet macular degeneration or other retinal disorders, central retinal artery or vein occlusion) or choroidopathy (e.g., choroidal detachment, effusion, choroiditis, or neovascularization).
26) Central corneal thickness that is less than 450 microns or greater than 620 microns.
27) Previous cyclodestructive procedure.
28) Prior retinal laser procedure conducted for any purpose other than treatment of retinal tear or hole.
29) Conditions associated with elevated episcleral venous pressure such as active thyroid orbitopathy, cavernous sinus fistula, Sturge-Weber syndrome, orbital tumors, orbital congestive disease.

30) Clinically significant sequelae from trauma (e.g., chemical burns, blunt trauma, etc.)
31) Ocular pathology or medical condition for which, in the investigator's judgment, the following factors would either place the subject at increased risk of complications or contraindicate device implantation or interfere with compliance to elements of the study protocol (e.g., ophthalmic examinations, follow-up visits),
    a. inability to reliably complete visual field testing over the course of the study,
    b. uncontrolled systemic disease (e.g. diabetes, hypertension) that could compromise their participation in the study.
    c. Disorders that pose a fall risk, as well as compromise ability to take a visual field exam and take glaucoma medications (e.g., Parkinson's disease),
    d. inability to discontinue use of blood thinners within the surgeon's standard preoperative or postoperative instructions.
    e. immunodeficiency concerns.
    f. known corticosteroid responders whose pressure increases would not allow them to withstand the postop corticosteroid regimen.
32) Intraocular silicone oil.
33) Ocular steroid use in the planned study eye or systemic steroid use anytime within three months of the procedure. (This would not include the use of inhaled or dermatologic steroids.)
34) Chemotherapy within six months of the screening visit.
35) Use of oral hypotensive glaucoma medications for treatment of the fellow eye.
36) A requirement of general anesthesia for the procedure.
37) Bacterial conjunctivitis
38) Bacterial corneal ulcers
39) Endophthalmitis
40) Orbital cellulitis
41) Bacteremia or septicemia
42) Active scleritis
43) Uveitis
44) Severe dry eye syndrome
45) Severe myopia
46) Pseudo-exfoliative glaucoma

7. STUDY PROCEDURES

7.1 Qualifying Assessment

Each potential patient will be seen by the investigator during a first visit and will be given an informed consent to be signed. Then each patient who will agree to participate (considered as enrolled at that time)will undergo a qualifying assessment to determine their eligibility for the study. Tests are listed in the table at section 9. Parameters for each test are given in section 8. If the patient meets all of the inclusion criteria and none of the exclusion criteria, he will qualify for surgery.

7.2 Treatment procedure

7.2.1 Anaesthesia

The type of anaesthesia will be at the surgeon's discretion. The procedure will be performed under local anaesthesia.

7.2.2 Preparation of InnFocus MicroShunt

Remove InnFocus MicroShunt from sterile packaging onto sterile field. Dampen the InnFocus MicroShunt using a solution of Balanced Sterile Saline.

7.2.3 Corneal Traction and Conjunctival Flap

Perform corneal traction with 7-0 suture at surgeon's discretion.

Perform a peritomy between two rectus muscles of the surgeon's choice and perform a posterior sub-Tenon delamination toward the equator of the eye about 8mm deep and 90-120º wide.

7.2.4 Preparation of Anterior Chamber Entrance Site

Apply 0.2mg/ml to 0.4mg/ml MMC soaked in 3 corneal Lasik shield sponges (provided in the kit) under the sub-conjunctival pouch over a circumference of 90^{o}-120^{o} at least 8mm deep for 2-3 minutes, remove the sponges and rinse with generous amounts of BSS (>20ml).

Note: Assure that the conjunctival wound edge does not come into contact with antimetabolite

Using the 3mm marker and the marker pen, measure a location 3 mm from the limbus for the scleral pocket to be made.

Using the 1mm knife, make a shallow scleral pocket.

Introduce a 25G needle into the scleral pocket and make a tract into the anterior chamber bisecting the iridocorneal angle.

7.2.5 Insertion of InnFocus MicroShunt into Anterior Chamber

Gently insert the InnFocus MicroShunt tube through the needle track using forceps, holding the IMS close to the track while keeping the arrow face parallel to the scleral surface with the bevel up toward the cornea and tuck the arrow into the scleral flap. If there is resistance to the placement of the InnFocus MicroShunt after multiple attempts to position it, use a 25G blunt tip cannula to re-enter the 25G needle track and assure it is open. Then attempt placement of the InnFocus MicroShunt again.

After successful insertion of the InnFocus MicroShunt, check the distal end of the device for flow from the anterior chamber and tuck it under the conjunctival flap.

Check that the InnFocus MicroShunt tube position in the AC is not in contact with the cornea or iris and that there is flow of aqueous.

7.2.6 Conjunctival Closure

Reposition the Tenon's and conjunctiva to the limbus and suture using 10-0 sutures. Check for no bleb leaks.

Verify the presence of the proximal end of the InnFocus MicroShunt in the anterior chamber.

Pull corneal traction suture out if it was used.

Apply antibiotic and steroidal ointment or drops post-op as appropriate.

NOTE: the patients will be proposed to sign an extra consent form for recording their surgeries. The reasons for recording videos are:

1. To observe/compare differences between surgeon techniques and see if they deviate from their original technique and register long-term documentation to better understand the relationship between the procedure and outcomes
2. As a means of educating or teaching prospective surgeons on the InnFocus procedure

3. To provide a recording that the surgeon can use for scientific presentations
4. To be able to capture some potential missed information during the procedure to have the best documentation (i.e. exact MMC time used);
5. In case of procedural not performed in the expected timelines/conditions this will allow post procedurally to determine for example why several attempts have been needed to implant the device, why the study duration has been modified;
6. To allow a better quality control to confirm or deny post procedurally potential links between a complication and the procedure, to confirm that the correct materials have been used;

7.2.7 Follow-up

Monitor the patients at each follow-up per the follow-up table shown in section 9 and the parameters given in section 8 below.

Any interim visits, i.e. an extra visit in between a normal postoperative visit, should be recorded on ADDITIONAL VISIT case report form.

8. PARAMETERS AND METHODS OF MEASUREMENT (FOR JUDGING OUTCOME OF STUDY)

8.1 Visual Acuity

Visual acuity is measured before pupil dilation, tonometry, gonioscopy, or any other technique that could affect vision. The Monoyer technique will be used for visual acuity testing. Refraction is performed prior to formal measurement of visual acuity at the Qualifying Assessment and at the 6 months and annual follow-up visits. Monoyer visual acuity is measured at the Qualifying Assessment and at every follow-up visit. Visual acuity will be Best Spectacle Corrected Visual Acuity (BSCVA). Insure that manifest refraction is also conducted.

8.1.1 Subjective Refraction

Subjective refraction must be performed at the Qualifying Assessment and at the 6 months and annual follow-up visits in order to determine best-corrected visual acuity. It is permissible to use a phoropter to determine best-corrected Monoyer visual acuity.

The left eye is occluded first. An approximate beginning refraction may be determined by retinoscopy, automated refraction, or a subjective refraction from a prior visit. The sphere is refined first. The cylinder is then refined, first the

axis followed by the power. Finally, the sphere is rechecked. The right eye is then occluded, and the procedure is repeated for the left eye.

If the patient wears contact lenses and has glasses also, he or she is instructed not to wear the contact lenses on the day of the Qualifying Assessment. Patients unwilling to discontinue contact lens use after surgery will be excluded from the study. In the event that the patient either has no glasses or has forgotten the instructions and reported for the Qualifying Assessment wearing contact lenses, a new examination appointment should be made.

8.1.2 Visual Acuity Procedure

Monoyer visual acuity may be measured using any standard visual acuity chart. The same type of chart must be used throughout the duration of the study. Monoyer visual acuity is measured during the Qualifying Assessment and at all follow-up visits. Standardized refraction is performed prior to Monoyer visual acuity testing at the Qualifying Assessment, 6 months and annual follow-up examinations.

The patient is not allowed to lean forward or backward so that a constant testing distance is maintained. After proper instruction and refraction, the left eye is occluded and testing is begun with the right eye. Progressively smaller lines are presented to the patient until he or she makes two or more errors in a line. When a patient states he or she is unable to read a letter, he or she is encouraged to guess. If a patient misses only two letters on a line, a second chance is provided by asking the patient to read the line backwards. The patient is encouraged to fix eccentrically if this improves the visual acuity, but care must be taken to ensure that the fellow eye remains covered. The Monoyer visual acuity is recorded as the smallest line in which the patient misses one or fewer optotypes. If the patient's visual acuity is so poor that he or she cannot read the 0.05 (20/400) line, assess his or her ability to count fingers. After testing of the right eye is completed, the procedure is repeated for the left eye.

8.1.3 Testing for Finger Counting

After proper instruction and refraction, the examiner's hand is viewed at a distance of two feet from the patient's eye. The fellow eye is closed and completely occluded by the palm of the patient's or assistant's hand. The examiner presents a random number of fingers to the patient. The patient is asked to indicate the number of fingers seen. If the number of fingers shown is correctly identified on four or more of five presentations, vision is recorded as

count fingers. If the number of fingers presented cannot be identified on four or more of five presentations, test for hand motions.

8.1.4 Testing for Hand Motions

In testing for hand motion, the examiner's hand is viewed with all fingers extended and separated at a distance of two feet from the patient's eye. The fellow eye is closed and completely occluded by the palm of the patient's or assistant's hand. The patient's glasses are not be worn. The examiner's hand is presented in a random order under three conditions: stationary, moving back and forth horizontally, and moving up and down vertically. The speed of movement is approximately one complete cycle of movement (up and down or back and forth) per second. The patient is instructed that the examiner's hand will be presented in one of these conditions. He or she is asked to respond to the question, "What is my hand doing now?" with either, "still", "back and forth", or "up and down". The process is repeated five times. It is considered a correct response if the patient states the hand is still or he or she cannot see it while it is stationary, and he or she is able to recognize movement and identify its direction. If hand motions are correctly identified on four or more of five presentations, vision is recorded as hand motions. If hand motions cannot be identified on four or more of five presentations, test for light perception.

8.1.5 Testing for Light Perception

Light perception is tested using the same complete occlusion of the fellow eye with no other bright lights visible from the patient's position. The patient's glasses are not worn. The light of an indirect ophthalmoscope is directed into the eye from a distance of 2 feet for one or two seconds, then turned away. The patient is asked to report "on" when he or she sees the light, and "off" when it disappears. The process is repeated five times in a non-rhythmic fashion. The visual acuity is recorded as light perception if the patient responds correctly four or more out of five times.

8.2 Slit Lamp Biomicroscopy

Examination of the anterior segment using slit lamp biomicroscopy is performed at the Qualifying Assessment to document the preoperative status of the eye, and at all follow-up examinations to detect any changes in ocular status during the course of the study which may be attributable to the disease or treatment. Slit lamp biomicroscopy may be performed with any commercially available instrument, and it is used in a standard fashion starting anteriorly and working posteriorly. Standardizing subjective grading of bleb leaks and lenticular opacities is difficult, if not impossible.

8.2.1 Lids

The lids are examined for signs of blepharitis, including scales and crusting of the lashes, inspissated Meibomian glands, and erythema of the lid margin. Eyes with severe posterior blepharitis are excluded from the study.

8.2.2 Conjunctiva

Eyes enrolled in the study with or without previous cataract surgery. Eyes must undergo Seidel testing at all postoperative follow-up examinations to detect conjunctival wound leaks and bleb leaks. Eyes that have undergone InnFocus MicroShunt implantation are examined carefully for tube erosion. The presence of an infiltrate or exudate in the bleb of eyes suggests the presence of a bleb-related infection.

8.2.3 Cornea

The cornea is examined at high magnification to evaluate the epithelium, stroma, and endothelium. The techniques of diffuse illumination, scleral scatter, and retro-illumination may be used. Findings consistent with a diagnosis of the iridocorneal endothelial (ICE) syndrome, epithelial downgrowth, or fibrous downgrowth make the eye ineligible for the study. The presence of corneal epithelial or stromal edema is noted. Eyes that have undergone InnFocus MicroShunt implantation are examined for the presence of tube-cornea touch.

8.2.4 Anterior Chamber

If the anterior chamber is shallow, the central anterior chamber depth is measured relative to the corneal thickness. The appropriate gradation of $\geq$ 3 CT, $\geq$ 2 CT, $\geq$ 1 CT, < 1 CT, or lens-cornea touch is documented. Before fluorescein instillation or pupillary dilation, the degree of anterior chamber cell and flare is determined. Eyes with chronic or recurrent uveitis are excluded from the study. Eyes with vitreous in the anterior chamber are ineligible for the study if it is anticipated that a vitrectomy will be needed at the time of glaucoma surgery. Careful assessment of the anterior chamber depth is made postoperatively.

8.2.5 Iris

Before pupillary dilation, the pupillary iris is examined at high magnification for the presence of neovascularization. If rubeosis iridis is present, the eye is ineligible for the study.

8.2.6. Lens

After pupillary dilation, the investigator assesses the lens and grades any cataract present as mild, moderate, or severe. In pseudophakic eyes, the presence of a posterior chamber or anterior chamber intraocular lens is documented. Aphakic eyes are excluded from the study.

8.3. Seidel Testing

Seidel testing must be performed at each postoperative follow-up examination. The Seidel test is performed using a fluorescein strip moistened with one or two drops of 0.5% proparacaine which is then applied to the conjunctiva. The area is closely observed using high magnification and a broad slit beam with maximal intensity illumination using a cobalt blue filter. Aqueous leakage is apparent as a light yellow stream and interrupts a dark green background of undiluted fluorescein. If the Seidel test is positive, the leak is graded as an ooze, frank leak, or brisk leak.

8.4. Tonometry

Goldmann applanation tonometry should be taken during the Qualifying Assessment and during all follow ups. Goldman applanation tonometry is used to measure the intraocular pressure, except when irregular corneal astigmatism, corneal scarring, or corneal edema precludes accurate readings. In these cases, the Tono-Pen (Mentor/Medtronic) or non-contact tonometry is used. The intraocular pressure is measured prior to pupillary dilation. Whenever possible, the intraocular pressure should be checked at the same time of the day as the Qualifying Assessment to minimize the effect of diurnal fluctuation of intraocular pressure. The tonometer should be calibrated at least once every 6 months.

Goldmann Applanation Tonometry

Clean the prism according to your institutional infection control policy. The right eye is always tested first. Following instillation of a drop of 0.5% proparacaine, a fluorescein strip is placed near the lateral canthus in the lower conjunctival sac. Once the lacrimal fluid has been sufficiently colored, the fluorescein strip is removed. Alternatively, one drop of premixed fluorescein and anesthetic may be instilled. The patient's head is properly positioned in the chin rest and against the forehead rest without leaning forward or straining. Any tight-fitting neckwear is loosened. The patient is asked to look straight ahead at a distant object or fixation target. If it is necessary to hold the eyelids open, the investigator holds the eyelids open against the orbital rim taking care not to apply any pressure on the globe. The patient is instructed not to hold his or her breath.

If corneal astigmatism is greater than 3.0 diopters, the prism is rotated so that the axis of the minus cylinder on the prism graduation corresponds to the red mark on the prism holder. The investigator looks through the slit lamp and gently brings the tip of the prism in contact with the center of the cornea. The mires should be well focused, centered horizontally, and positioned vertically so that they are of equal circumference above and below the horizontal dividing line. If the mires are narrower than approximately one tenth of their diameter, the investigator instills additional fluorescein. The investigator adjusts the measuring drum until the inner borders of the two mires just touch each other. If pulsation is present, the measuring drum is adjusted until the mires separate a given distance during systole and overlap the same distance during diastole. The investigator removes the prism from the cornea and repeats the procedure in the right eye until two successive measurements are within 2 mm Hg. The investigator records the last two successive measurements. After testing of the right eye is complete, testing of the left eye follows the same technique.

8.5. Motility Evaluation

Diplopia is a complication which historically has occurred on occasion following drainage device implantation. The incidence of permanent restrictive strabismus associated with drainage implants is not precisely known, as this complication has not been studied prospectively. In order to address this issue, a formal motility evaluation is performed in all patients preoperatively and in those patients with diplopia at the 6, 12 and 24 month follow-up visit or beyond. In addition, all patients will undergo a motility evaluation at the 1 year follow-up visit. Transient diplopia following drainage device implantation is not uncommon. This study will focus on the incidence and nature of permanent restrictive strabismus associated with the drainage device implant.

The cover-uncover and alternate cover tests are performed with the patient looking in primary gaze, as well as in upgaze, downgaze, left gaze, and right gaze. Motility evaluation is performed with the patient looking in the distance and fixating at a near target. Any heterophorias or heterotropias are identified, and the deviation is measured with hand-held prisms. In patients who are unable to fixate for cover testing, the deviation may be measured by centering the corneal light reflexes with prism using the modified Krimsky method.

8.6. Gonioscopy

Gonioscopy is performed during the Qualifying Assessment and in further follow ups depending on the surgeon's discretion. The patient sits at the slit lamp using either a Zeiss type four-mirror gonioprism or Goldmann single- or three-mirror lens. An examination of the anterior chamber angle for neovascularization is performed under

high magnification for the purpose of excluding eyes with neovascularization from the study.

8.7. Peripheral Fundus Exam

A dilated fundus examination is performed at the Qualifying Assessment to determine the preoperative status of the eye, and at all postoperative follow-up examinations to detect any changes in ocular status produced by the disease or treatment. After pupil dilation with appropriate mydriatics, the optic nerve and posterior pole are examined at the slit lamp using a Hruby lens, fundus contact lens, or Volk 90 diopter, 78 diopter, or 60 diopter lens. A head-mounted indirect ophthalmoscope and hand held condensing lens (20 diopter or 28 diopter Nikon aspheric lens) is used to evaluate the retinal periphery. A photo should be taken of the optic nerve.

At the Qualifying Assessment, particular attention is paid for signs of proliferative retinopathy, including retinal neovascularization, neovascularization of the disc, vitreous hemorrhage, or preretinal hemorrhage. Patients with active proliferative retinopathy are excluded from the study. At all postoperative follow-up visits, ophthalmoscopy is performed to evaluate for posterior segment complications, such as serous choroidal effusions, suprachoroidal hemorrhage, or hypotony maculopathy.

8.8. Perimetry

Visual field assessment is another important outcome measure. Quantitative automated perimetry is performed using the Humphrey Field Analyzer. The Octupus machine is an option; however, if used, a Humphrey print out should be collected for future analysis with other clinical data. The site should be consistent to which machine to use and not alternate between machines if both are available.

Visual field testing is performed preoperatively (not needed if a visual field has been done within 6 months of enrollment) and 1 year post operatively. Visual field testing is performed before tonometry, gonioscopy, or any other technique that could affect vision. A visual field should be attempted in any eye that has sufficient vision greater than 0.1(20/200). Eyes with poor central vision may have an intact, off-center island of vision which may be measured with perimetry.

A 24-2 threshold test is performed in all patients capable of having visual fields done, using a size III white stimulus. Visual field testing may be performed with the Swedish Interactive Thresholding Algorithm (SITA) or full threshold strategy, but the same testing strategy must be used throughout the duration of the study. The pupil diameter should be 3 mm or greater before visual field testing is undertaken, and this may require pharmacologic dilation. Standardized refraction is performed to determine the patient's

distance refraction and best-corrected visual acuity prior to visual field testing. The age appropriate plus lens is added to the distance refraction. Patient education is provided. The technician should monitor the patient during testing.

8.9 Pachymetry

Pachymetry should be measured three times during the baseline exam utilizing an electronic pachymeter. These three measurements are to be recorded in the source document and averaged; the mean value should also then be recorded in the appropriate location with the Case Report Form.

9. SCHEDULE OF TESTS TO BE CONDUCTED

	Patient History	Informed consent	Inclusion/Exclusion criteria	Pachymetry	Pregnancy test[a]	Visual Acuity	Slit Lamp	Seidel Test	Tonometry	Motility evaluation	Gonioscopy	Ophthalmoscopy	Perimetry
Qualifying Assessment and Preop - Baseline	x	x	x	x	x	x	x		x	x	x	x	x
Day 0 - Procedure													
Day 1						x	x	x	x			x	
Day 7						x	x	x	x			x	
4 Weeks						x	x	x	x			x	
Month 3						x	x	x	x			x	
Month 6						x	x	x	x	x		x	
Month 9						x	x	x	x			x	
Month 12						x	x	x	x	x		x	x
Month 24						x	x	x	x	x		x	x

[a] for non-menopausal women

Acceptable Visit Windows

Day 0: Operative Day
Day 1: ± 0 day
Day 7: ± 1 day
4 weeks: ± 2 days
Month 3: ± 1 week
Month 6: ± 1 week
Month 9: ± 2 weeks
Month 12: ± 2 weeks
Month 24: ± 2 weeks

10. HEALTH ECONOMICS CONSIDERATIONS

The use of the InnFocus MicroShunt is associated with consequences both in terms of effectiveness and costs, as it is expected to limit the need for antiglaucoma medications and glaucoma surgical procedures. For further health economics modelling purposes, cost data will be collected throughout the study.

Production costs incurred in the collective perspective will be collected. Costs are measured from the enrollment visit until the end of follow-up. Costs associated with the initial procedure and with follow-up procedures, either due to routine follow-up, to complications or to the natural history of disease, will be reported. Cost data will be reported on corresponding case report forms, without incidence on patient's clinical follow-up.

Cost data will be collected prospectively through the observation of resources used for each enrolled patient during the initial intervention and hospital stay. Resources used after the initial intervention will be assessed based on scheduled follow-up visits and potential adverse event reports. All used resources will then be valued in each country using hospital accounting and/or administrative databases.

11. STATISTICAL CONSIDERATIONS

11.1 Sample size determination

In order to estimate the necessary sample size of the study, and due to the absence of guideline in terms of Objective Performance Criteria, reported effectiveness results on similar devices from bibliography have been extensively studied (see Section 2.1).

Even though a relatively large variability has been noticed, it appears that a credible level of performance at the 1-year follow-up for the primary endpoint should be at least above 50%.

As a result, we conducted sample size calculation in order to demonstrate that the incidence of success using InnFocus Micro Shunt device was above 50%. We used the NQuery software and a one group Chi-Square test, in a bilateral situation, with an alpha level and a power fixed at 5% and 80% respectively.

The table below summarized the resulting figure.

Test significance level, alpha	0,05
1 or 2 sided test?	2
Null hypothesis proportion	50%
Alternative proportion	65%
Power (%)	80
N	85

To take into account the subjects who can possibly drop-out the study before the 1-year follow-up, the final sample size has been increased to 100 subjects as a whole.

11.2 Analyzed data sets

According to their purposes, the following patient populations apply to the statistical analyses:

SAF population *('Safety' population)*: All subjects enrolled and who have signed the informed consent.

ITT population *('Intention To Treat' population)*: All enrolled subjects from the Safety population who attended the procedure visit to receive the assigned therapy under evaluation (InnFocus MicroShunt).

PP population *('Per-Protocol' population)*: will be defined as subjects from the ITT population without any major deviations.

11.3 Handling missing values

In order to provide unbiased and informative findings, no replacement of missing values is planned for any parameters. In all applicable cases, reported analysis will mention the number of missing values for each outcome relatively to the considered analysis set (SAF, ITT or PP).

11.4 General considerations

Statistical analyses will be done using SAS System®, Version 9.2 or further.
All statistical analyses will be made on locked databases, after a careful review of the data in order to identify the protocol deviations and their potential impact on endpoints analysis (bias in result).
Protocol Violations will then be classified as minor or major and major ones will define exclusion of the subjects from the Per Protocol Population, conducted to further analyze data.

11.5 Data Analysis Methods

Major outcomes defined for this study will be analyzed with the following methods:

Effectiveness endpoints (ITT and PP population):

Primary effectiveness endpoint
For patients with baseline IOP ≥18 to ≤ 21 mmHg, success will be measured as a patient who achieves an IOP reduction of 20% or greater with no reoperation for glaucoma or loss of light perception vision.

For patients with baseline IOP >21 mmHg, success will be measured as a patient with IOP<21 mmHg and IOP reduction from baseline of 20% or greater with no reoperation for glaucoma or loss of light perception vision.
The following Chi-Square test will be conducted at the 5% level.

Ho : Incidence of success = 50% versus Ha: Incidence of success <> 50%

Reduction in intraocular pressure relative to the pre-operative value will be assessed at each post-operative visit (D1, D7, W4, M3, M6, M9, M12 and M24) with a first measurement of success at 12 months.

These quantitative end-points will be presented in terms of mean, standard-deviation, median, extreme values, quartiles and number of missing data. Reduction in IOP will be also clarified by the means of the 95% confidence interval at each time point.

Complete success is a patient who is not on supplemental medical therapy to obtain controlled levels of intraocular pressure.
Qualified success is defined as a patient who requires supplemental medical therapy to maintain controlled levels of intraocular pressure.
Exact bilateral confidence intervals for binomial distributions will be calculated at the 95% level for complete and qualified success.

A reoperation to better the aqueous drainage like a trabeculectomy or an implantation of another drainage implant is considered a failure as it does not fulfill the criteria for success mentioned above. Needling of the bleb or post-surgical injection of an anti-fibrotic are not considered failures.
These qualitative end-points will be presented in term of number and percentage of each modality. The number of missing data will be also given. Exact bilateral confidence interval for binomial distributions will be calculated at the 95% level.

Secondary effectiveness criteria (ITT and PP population):

The level of glaucoma supplemental medical therapy during the study follow-up will be presented as mean, standard-deviation, median, extreme values, quartiles and number of missing data of glaucoma medications per subject.

Safety endpoints (SAF and ITT population):

Incidence of all device and/or procedure-related Adverse Events during the study are of primary importance, but all occurred adverse events will be reported and summarized. Number of adverse events as a whole, number and percentage of patients with at least one device and/or procedure related adverse event will be presented.

Exact bilateral confidence intervals for binomial distributions will be calculated at the 95% level.

12. MONITORING

Subjects will be carefully monitored during the study for possible AEs. Any AE observed will be fully investigated by the Investigator and classified in line with the definitions below. All adverse events that occur during this study will be recorded on the adverse event case report forms. All adverse events will be followed until resolution or until the Investigator judges the outcome to be chronic or stable.

Adverse events will be reported and classified by the investigator using the specific signs, symptoms or abnormal laboratory values, or medical diagnosis if no signs, symptoms or abnormal laboratory values can be identified.

The investigator will classify the adverse events based on the definitions as follows (EN ISO 14155:2011):

12.1 Definitions

Adverse Event (AE) – Any untoward medical occurrence, unintended disease or injury or any untoward clinical signs (including an abnormal laboratory finding) in subjects, users or other persons whether or not related to the investigational medical device.

NOTE 1 This includes events related to the investigational medical device

NOTE 2 This includes events related to the procedures involved

NOTE 3 For users or other persons this is restricted to events related to the investigational medical device.

NOTE 4 Any significant and justified deterioration/worsening of preexisting conditions will also be registered as Adverse Event

All adverse events reported spontaneously by the subject or observed by the investigator or his staff will be recorded.

Adverse Device Effect (ADE) – Adverse Event related to the use of a medical device.
NOTE 1 This definition includes adverse events resulting from insufficient or inadequate instructions for use, deployment, implantation, installation, or operation, or any malfunction of the investigational medical device.

NOTE 2 This definition includes any event resulting from use error or from intentional misuse of the study medical device.

Serious adverse event (SAE) - adverse event that:

a) led to a death,
b) led to a serious deterioration in the health of the subject, that either resulted in:
    1. a life-threatening illness or injury, or
    2. a permanent impairment of a body structure or a body function, or
    3. in-patient or prolonged hospitalization, or
    4. medical or surgical intervention to prevent life threatening illness or injury or permanent impairment to a body structure or a body function.
c) led to foetal distress, foetal death or a congenital abnormality or birth defect

NOTE 1: A planned hospitalization for pre-existing condition, or a procedure required by the CIP, without a serious deterioration in health, is not considered to be a serious adverse event.
NOTE 2: Any other important medical event that may not result in death, be life threatening, or require hospitalization, may be considered a serious adverse event when, based upon appropriate medical judgment, the event may jeopardize the subject or may require an intervention to prevent one of the outcomes listed above.

Serious adverse device effect (SADE) - adverse device effect that has resulted in any of the consequences characteristic of a serious adverse event.

Unanticipated serious adverse device effect (USADE) - serious adverse device effect which by its nature, incidence, severity or outcome has not been identified in the current version of the risk analysis report

NOTE Anticipated: an effect which by its nature, incidence, severity or outcome has been previously identified in the risk analysis report.

12.2 Severity of Adverse Events

The following definitions for rating severity of adverse events will be used:

Mild: Awareness of signs or symptoms, but easily tolerated; are of minor irritant type; causing no loss of time from normal activities; symptoms would not require medication or a medical evaluation; signs or symptoms are transient.

Moderate: Interferes with the subject's usual activity and/or requires symptomatic treatment.

Severe: Symptom(s) causing severe discomfort and significant impact of the subject's usual activity and requires treatment.

These definitions are for descriptive purposes only and are independent of the judgment of whether an event is classified as an AE or an SAE.

12.3 Assessment of Relationship to Investigational Product

Investigators are required to asses wither there is a reasonable possibility that the investigational product caused or contributed to an AE. InnFocus, Inc. defines four degrees of relatedness: not related, unlikely, Likely and Definite related to the investigational device.

The following definitions will be used to assess the relationship of the adverse effect to use of the study device:

Not Related:	The effect is definitely not associated with use of the device. The adverse effect is due to an underlying or concurrent illness or effect of another device or drug.
Unlikely:	An adverse effect has little or no temporal relationship to the study device and/or a more likely alternative etiology exists.
Likely:	The temporal sequence between device use and the effect is such that the relationship is not unlikely or subject's condition or concomitant therapy could have caused the AE. The temporal sequence is relevant or the effect subsides upon device completion/removal or the effect cannot be reasonably explained by the subject's condition.
Definite:	The effect is definitely associated with use of of device.

If any adverse event is considered to be either "likely" or "definite" related to the use of the investigational device, that event will classed as an ADE or a SADE.

12.4 Anticipated Adverse Device Effects

The following list includes possible adverse device effects which may possibly be associated with the study. This includes anticipated events related to the surgeon, procedures and the subject's participation in the study. These may occur during the present study in relation to the implantation of the InnFocus MicroShunt. This list does not preclude the occurrence of other unforeseen effects. Definitions of the following items may be found in Annex A:

- 5FU/MMC post-surgical injection of bleb area
- Anesthesia-related complications
- Anterior Chamber Puncture (fluid leak)
- Aqueous Humor Misdirection (malignant glaucoma)

- Blebitis
- Bleb Leak based on Seidel positive test
- Choroidal Effusion/detachment intraoperatively
- Choroidal Effusion/detachment post surgery
- Choroidal hemorrhage intraoperatively
- Choroidal hemorrhage post surgery
- Chronic pain
- Clinically significant corneal damage
- Clinically significant iris damageConjunctival dehiscence
- Conjunctival Dissection
- Corneal Abrasion during surgery
- Corneal Edema
- Device malfunction
- Diplopia
- Encapsulated Bleb causing increased IOP
- Endophthalmitis
- Erosion of device through the conjunctiva
- Event requiring unplanned ocular surgical re-interention
- Failure to implant the device
- Flat anterior chamber
- Globe Perforation during the implantation or anesthesia
- Hyphema (>10% of AC)
- Hypotony (IOP<6mmHg)
- Hypotony maculopathy
- Implant migration
- Inadequate pain control following surgery
- Increased IOP requiring glaucoma medication
- Increased IOP requiring treatment with oral or intravenous medication
- Iris abrasion during surgery
- Laser removal of blockage at tip of MicroShunt or at AC entrance point
- Leakage of wound site based on Seidel test
- Loss of light perception
- Macular edema
- Needle damaged corneal endothelium
- Needling
- Posterior capsule opacification
- Prolonged inflammation resulting from surgery defined as requiring anti-inflammatory medication duration and dosage in excess of standard post-op instructions
- Proptosis
- Pupillary block

- Resuture scleral flap
- Retinal complication (dialysis, flap tears, detachment, decompression or proliferative retinopathy)
- Shallow Anterior Chamber
- Strabismus
- Subconjunctival bleeding at any time post-operatively
- Suture abscess or other local infection
- Tube obstruction partial or complete regardless of how long the obstruction is present
- Tube in contact with cornea, iris or lens
- Use of viscoelastic to limit aqueous flow
- Vitreous Hemorrhage

12.5 Notification of Serious Adverse Events

All serious adverse events (SA(D)Es) should be phoned / faxed / e-mailed to MedPass International within 24 hours of learning of an event. The InnFocus, Inc SA(D)E Case Report Form should be used.

[redacted]

It is the responsibility of each Investigator to report all Serious Adverse Events to the Ethics Committee, according to national regulations and Ethics Committee requirements. In some countries the safety reporting to the Ethics Committee falls under the Sponsor responsibility.

In the Netherlands and as of 1 January 2010 the sponsor is required to report the SAEs through the web portal **ToetsingOnline** to the accredited METC that approved the protocol, within 15 days after the sponsor has first knowledge of the serious adverse events.

SA(D)Es that result in death or are life threatening should be reported expedited. The expedited reporting will occur not later than 7 days after the responsible investigator has first knowledge of the adverse event. This is for a preliminary report with another 8 days for completion of the report. InnFocus, Inc. will assure that all SAEs are reported to the Competent Authorities as needed as per the applicable national regulations. Moreover InnFocus, Inc. will also assure that its Authorized Representative will report to the Competent Authorities all Incidents meeting the vigilance criteria as per MEDDEV 2.12-1 on Medical Devices Vigilance system.

InnFocus, Inc. will submit intermediate safety reports to the Ethics Committee and Competent Authorities, according to national regulations.

To be also noted that in the Netherlands and in accordance to section 10, subsection 1, of the WMO, the investigator will inform the subjects and the reviewing accredited METC if anything occurs, on the basis of which it appears that the disadvantages of participation may be significantly greater than was foreseen in the research proposal. The study will be suspended pending further review by the accredited METC, except insofar as suspension would jeopardize the subjects' health. The investigator will take care that all subjects are kept informed.

12.6 Handling and Recording of Adverse Events

Appropriate treatment of the Subject will be initiated but the Trial follow-up will continue. Collection of Adverse Event data begins at the time the Subject is enrolled in the Trial and continues throughout the procedure and active surveillance period.
All observations and clinical findings, including the nature and severity will be documented on the appropriate Case Reports Forms. The pre-existing medical conditions will be recorded on the pre-operative Case Report Form. Any new experience that was not present at baseline, or worsening in intensity or frequency of an event present at baseline, is considered an Adverse Event. Note: Unchanged, chronic conditions are NOT Adverse Events and should not be recorded on the Adverse Event page of the Case Report Form (CRF).
The Sponsor will discuss with the Principal Investigator all Adverse Events and Serious Adverse Events and coordinate appropriate actions, in particular their notification to other investigators as applicable.
Adverse Event terms should be recorded consistently, using acceptable medical terms. When possible, a diagnosis (*i.e.*, disease or syndrome) rather than the component signs and symptoms should be recorded on the Case Report Form (*e.g.*, record congestive heart failure rather than dyspnea, rales and cyanosis). However, signs and symptoms considered unrelated to encountered syndromes or diseases are to be recorded as individual Adverse Events on the Case Report Form (*e.g.*, if congestive heart failure and severe headaches are observed at the same time, each experience is to be recorded as an individual Adverse Event). The AE should not be recorded as a procedure or clinical measurement (*i.e.*, a laboratory measurement or vital sign) but should reflect the reason for the procedure or diagnosis.
Death is considered to be an outcome of an Adverse Event. The cause of death (rather than the term "**death**") should be recorded on the Serious Adverse Event Case Report Forms.
Subjects should be encouraged to report AEs spontaneously or in response to general, non-directed questioning. At each required visit (or whenever reported) during the Trial, all AEs that have occurred since the previous visit must be recorded on the Adverse Event Case Report Form. For each AE, the Principal Investigator should obtain all the information required to complete the Adverse Event page on the CRF.

All AEs, must be followed until resolution or until a stable clinical endpoint is reached.
Depending on the event, follow up may require additional tests or medical procedures as

indicated, and/or referral to the general physician or a medical specialist. SAEs need to be reported till end of study within the Netherlands, as defined in the protocol. All measures required for AE management and the ultimate outcome for the AE must be recorded in the source document and reported to the appropriate contact.

12.7 Treatment failures, device deficiencies & malfunctions

All device deficiencies related to the identity, quality, durability, reliability, safety or performance of the medical device shall be documented throughout the study and immediately reported to the sponsor (without any delay that cannot be justified and within 24 hours of occurrence). Investigators must report all possible device deficiencies, malfunctions or near incidents associated with the device, observed during the course of the trial. This includes unexpected outcomes or device deficiencies that might have led to a serious adverse event if a) suitable action had not been taken or b) intervention had not been made or c) if circumstances had been less fortunate.

Definitions

Device deficiency - inadequacy of a medical device related to its identity, quality, durability, reliability, safety or performance, such as malfunction, use error and inadequate labeling (ISO 14155:2011).

NOTE: Device deficiencies include malfunction, misuse or use error and inadequate labeling.

Malfunction - failure of an investigational medical device to perform in accordance with its intended purpose when used in accordance with the instructions for use or CIP (ISO 14155:2011).

Use Error – act or omission of an act that results in a different medical device response than intended by the manufacturer or expected by the user (ISO 14971)
NOTE 1: Use error includes slips, lapses and mistakes
NOTE 2: An unexpected physiological response of the patient does not itself constitute a use error

All treatment failures and device malfunctions of the FSU device are required to be documented on the Procedure/ Device Observation Case Report Form. In the event of a suspected malfunction or device problem, or if the device is removed, the device shall be returned to the Sponsor for analysis.

13. DATA QUALITY ASSURANCE

13.1 Monitoring Procedures

Under the supervision of InnFocus, Inc., monitors will conduct clinical site monitoring to ensure that the investigator is in compliance with the regulatory requirements of the Standard EN ISO 14155:2011, and with recommendations guiding physicians in biomedical research involving human subjects adopted by the 18th World Medical Assembly, Helsinki, Finland, 1964 and later revisions, with the protocol and with the Investigator's Agreement. The site will be monitored to ensure completed electronic Case Report Forms match the hospital's patient records and to resolve any differences which may be found. The monitors and InnFocus, Inc. will evaluate circumstances where the investigator deviates from the clinical protocol and corrective actions will be taken.

InnFocus, Inc. has appointed MedPass International as Clinical Monitor for this study. MedPass personnel are qualified by training and experience to oversee the conduct of the study. MedPass will fulfill the responsibilities identified in its standard operating procedures, available for review at MedPass. These responsibilities include collecting and tracking data forms and trial compliance.

The Monitor's responsibilities include: maintaining regular contact with the investigational site, through telephone contact and on-site visits, to ensure that the investigational plan is followed; that complete, timely and accurate data are submitted; that problems with inconsistent and incomplete data are addressed; and that the site facilities continue to be adequate. Any questions regarding these matters should be addressed to MedPass International.

InnFocus, Inc. and MedPass will review significant new information, including unanticipated adverse events, and ensure that such information is provided to the investigator, and to the Regulatory Authorities and Ethics Committee, as appropriate.

As defined in the ISO 14155:2011 §3.32, an informed consent form must be signed by each patient to consider him as enrolled in the study and before any study related examination and implant of the study device.

Informed consent will be obtained according to individual institution guidelines. These documents will be audited by the monitor to ensure they have been signed prior to the implant procedure and that the correct version was used. The Sponsor will provide centers with a sample informed consent document that the center may modify to meet individual institutional review board requirements.

The electronic case report forms (eCRF) must be completed for all patients enrolled into the study. This eCRF will be a complete and accurate record of patient's data collected during the study according to EN ISO 14155:2011 standard and GCP recommendations. It is the responsibility of the investigator to ensure the quality of the data collected and recorded. The eCRF will be reviewed for errors, omissions, internal consistency, and to ensure that the investigator has electronically signed and validated the data registered.

Data collection will include photographs and clinical data based on the clinical endpoints outlined above. Data will be collected by study investigators and reported on the eCRF provided by the Sponsor.

13.2 Selection of Investigator

Investigators are selected based on their education and experience in the treatment of glaucoma. Investigators are required to sign an investigators agreement that assures that they will meet the protocol and all applicable regulatory requirements.

13.3 Training

The investigator will be trained in the use of the device under consideration and made familiar with the background and requirements of the clinical investigation methodology.

The training of appropriate clinical site personnel will be the responsibility of the Sponsor. To ensure uniform data collection and protocol compliance, the Sponsor will make a formal presentation to study site personnel which will include a presentation of the device and the study, a review of the Study Plan, techniques for the identification of eligible patients, instructions for in-hospital data collection, methods for soliciting data from alternative sources, schedules for follow-up with the study site coordinators, and regulatory requirements including vigilance but also if applicable Safety reporting. A special review will be performed by the sponsor to each physician who will treat patients concerning the instructions for use.

Devices will be provided to the participating site only once this site will have been trained, contracts have been signed and necessary IRB approvals to start the trail have been received.

13.4 Patient Data Protection

All information and data concerning patients or their participation in this trial will be considered confidential. Only authorized personnel might have access to these confidential files. All data used in the analysis and reporting of this evaluation will be without identifiable reference to the patients.

Data will be collected at the outpatient department by a member of the study team (investigator or study coordinator/research assistant) All recorded data will be collected from medical file after the patients have given their consent.

Direct access to the subject's original medical records will be ganted for trial-related monitoring (monitors), audit (auditors), IRB/IEC review, and regulatory inspection (inspectors). Subjects will consent in writing for such access.

As it is necessary to be able to trace data to an individual subject, a subject identification code list can be used to link the data to the subject. The code should not be based on the patient initials and birth-date. The principal investigator will keep filed in the regulatory binder the patient ID log

containing that information. This binder will be archived for 15 years after the study end following the local and national requirements.

13.5 Sponsor Records

InnFocus, Inc. and the CRO will maintain copies of correspondence, data, adverse device effects and other records related to the clinical trial. InnFocus, Inc. will maintain records related to the signed Investigator Agreements.

13.6 Sponsor Reports

InnFocus, Inc. will submit reports of findings in this study to the relevant ethics committee. Unanticipated adverse device effects will also be reported.

13.7 Site Record Retention Policy

The clinical sites will maintain study records in accordance with the record retention requirements for their respective country. A patient's identity will not be disclosed to any third party without the patient's prior, written consent. Record retention dates will be provided to all concerned by InnFocus, Inc. at the end of the study.

14. ETHICAL AND REGULATORY CONSIDERATIONS

The study will be performed in accordance with the standard EN ISO 14155:2011 on clinical investigation of medical devices for human subjects – good clinical practice, the MEDDEV 2.12-1 (Medical devices vigilance system), the MEDDEV 2.12/2 (Post market clinical follow-up studies), and recommendations guiding physicians in biomedical research involving human subjects adopted by the 18th World Medical Assembly, Helsinki, Finland, 1964 and later revisions.

The study plan and informed consent will be reviewed and approved before enrollment of patients by the appropriate ethics committee where the study will be conducted.

14.1 Role of InnFocus, Inc.

As the study Sponsor of this clinical study, InnFocus, Inc. has the overall responsibility for the conduct of the study, including assurance that the study meets the regulatory requirements of EN ISO 14155:2011 on clinical investigation of medical devices for human subjects – good clinical practice. InnFocus, Inc. or its representative will ensure adherence to EN ISO 14155:2011 standard and the Sponsor general duties, selection of investigators, monitoring, supplemental applications, maintaining records, safety evaluation and submitting reports.

14.2 General Duties

InnFocus, Inc.'s general duties consist of obtaining ethics committee approvals, and competent authority approvals where applicable, prior to providing the devices, selecting investigators, ensuring proper clinical site monitoring and ensuring subject informed consent is obtained.

14.3 Investigator Responsibilities

The clinical investigator will ensure that the study is conducted in compliance with the regulatory requirements of EN ISO 14155 and recommendations guiding physicians in biomedical research involving human subjects adopted by the 18th World Medical Assembly, Helsinki, Finland, 1964 and later revisions and with the protocol and the Investigator's Agreement.

The clinical investigator shall be responsible for the day-to-day conduct of the investigation as well as for the safety and well-being of the human subjects involved in the clinical investigation.

The clinical investigator shall have the resources to conduct the study properly and obtain from the Sponsor the information which she judges essential about the device and be familiar with this information.

The clinical investigator shall ensure that adequate information is given to the subject both in oral and written form, on the nature of the study. This information shall be easily understandable by the subject. This information shall include the aims, expected benefits for him and/or others, risks and inconveniences and an explanation of any alternative methods, and of possible consequences of any withdrawal from the study. Subjects shall be allowed sufficient time to decide whether or not they wish to participate. The subjects shall be informed that his participation in the clinical investigation is confidential. He shall be made aware that the data relating to the study may be made available to third parties while maintaining anonymity.

The investigator must obtain a written institutional review board approval prior to including any patient in this study.

14.4 Patient Information and Consent

Whereas the screening will be performed by the treating investigator, a different investigator will ensure the consenting process.

All patients will receive full and adequate verbal and written information and will have at least one week to consider their decision to participate and to sign the informed consent form prior to their inclusion in the study. A copy of the approved informed consent form along with a copy of each patient's signed consent form will be maintained by the investigator in a designated clinical study administrative file. A copy of the signed consent form must be given to each patient.

14.5 Accountability

It is the responsibility of the Investigator to ensure that all devices received at the site be inventoried and accounted for throughout the study and recorded in the inventory log kept in the site study documents. Implant accountability will be verified by the Sponsor's study monitor

during on-site monitoring visits. Access to InnFocus MicroShunt devices shall be controlled and the devices shall be used only in the market surveillance study and according to the protocol.

A Device Accountability Log will be maintained by each clinical investigator or his designee. Each device received will be recorded in the log, together with its ultimate disposition.

A Device Tracking Form must be completed for each implanted device. The device label should be affixed to the form and filed in the subject's study record.

The Investigator will not supply study devices to any person except designated staff in this study. Study implants will only be dispensed form the designated investigational site.

Investigator will not supply study implants to any person except designated staff in this study. Study implants will only be dispensed from the designated investigational site.

The Investigator will store and dispose of FSU devices and their remnants per the Sponsor's instructions. Disposal of unused devices will be recorded in the source documents and in the inventory log.

14.6 Ethics Committee and Competent Authority Approval

Before commencement of the study, each Investigator, if responsible as per national regulation, must provide InnFocus, Inc. with written documentation of Ethics Committee approval of both the protocol and the informed consent form, which must comply with all requirements outlined by InnFocus, Inc. In some cases, depending on the country regulation, obtaining the Ethics Committee approval is the responsibility of the sponsor. In any cases, this approval must refer to the informed consent form and the study by title and the protocol number as given by InnFocus, Inc. For any Investigator, if a member of the committee, is not to participate in the decision. This non-participation must be noted in the approval letter.

No device supplies will be shipped to an Investigator until Ethics Committee approval has been given in writing and each Investigator has supplied InnFocus, Inc. with copies of the Ethics Committee approval document and the informed consent form to be used.

If applicable by national regulations, InnFocus, Inc. will be responsible of obtaining the competent authority approvals and to provide it to the site before commencement of the study.

14.7 Supplemental Applications – Amendments

As appropriate, InnFocus, Inc. will submit changes in the Market Surveillance Study to the investigator or its designee to obtain re-approval by the ethics committee.

14.8 Annual progress report

It is expected that following national/local requirements InnFocus will have to submit a summary of the progress of the trial to the EC/CA once a year. Information will be provided on the date of inclusion of the first subject. Information regarding numbers of subjects included and numbers of

subjects that have completed the trial, serious adverse events, other problems, and amendments might be registered in this report.

14.9 Study Termination

The sponsor may suspend or prematurely terminate either the study in an individual investigation site or the entire study.

A principal investigator, EC, or regulatory authority may suspend or prematurely terminate participation in the study at the investigation sites for which they are responsible.

If suspicion of an unacceptable risk to subjects arises during the study, or when so instructed by the EC or regulatory authorities, the sponsor shall suspend the study while the risk is assessed. The sponsor shall terminate the study if an unacceptable risk is confirmed.

The sponsor shall consider terminating or suspending the participation of a particular investigation site or investigator in the study if monitoring or auditing identifies serious or repeated deviations on the part of an investigator.

If suspension or premature termination occurs, the terminating party shall justify its decision in writing and promptly inform the other parties with whom they are in direct communication. The principal investigator and sponsor shall keep each other informed of any communication received from either the EC or the regulatory authority.

If suspension or premature termination occurs,

a) the sponsor shall remain responsible for providing resources to fulfill the obligations from the CIP and existing agreements for following up the subjects enrolled in the study, and

b) the principal investigator or authorized designee shall promptly inform the enrolled subjects at his/her investigation site, if appropriate.

In case of premature termination, the sponsor will notify the EC and CA within 15 days, including the reasons for the premature termination (see also safety section 12.5 for the Netherlands).

For the expected study termination in following the national/local requirements the sponsor, InnFocus, will notify the accredited EC and the competent authority of the end of the study within the defined period of time. The end of the study is reached when the last patient included has performed his last follow up visit as defined in the protocol.

Within one year after the end of the study, the investigator/sponsor will submit a final study report with the results of the study, including any publications/abstracts of the study, to the ECand the Competent Authority.

14.10 Withdrawal

Subjects can leave the study at any time for any reason if they wish to do so without any consequences. The subject is not obliged to provide the reason for withdrawal to the investigator. The investigator can decide to withdraw a subject from the study for urgent medical reasons. Subjects may also be considered as withdrawn if needed attempts have been made to contact them but without success. In that case the patient will be registered as lost to follow up. When a subject leaves the study or is withdrawn for urgent medical reasons, this is recorded in the patient's paper medical file and in the Case Report Form.

When relevant, and according to the country requirements, the Ethics Committee and/or the Competent Authority should be informed.

14.11 Protocol Deviations

Any deviation from the protocol shall be recorded together with an explanation for the deviation. Deviations shall be reported to the Sponsor who is responsible for analyzing them and assessing their significance.

14.12 Insurance

The sponsor has taken specific insurances for conducting the clinic study in accordance with the national legislation where the study takes place.

In the Netherlands, the sponsor has a liability insurance which is in accordance with article 7, subsection 9 of the WMO. The sponsor also has an insurance which is in accordance with the legal requirements in the Netherlands (Article 7 WMO and the Measure regarding Compulsory Insurance for Clinical Research in Humans of 23th June 2003). This insurance provides cover for damage to research subjects through injury or death caused by the study.

1. € 450.000,-- (i.e. four hundred and fifty thousand Euro) for death or injury for each subject who participates in the Research;
2. € 3.500.000,-- (i.e. three million five hundred thousand Euro) for death or injury for all subjects who participate in the Research;
3. € 5.000.000,-- (i.e. five million Euro) for the total damage incurred by the organisation for all damage disclosed by scientific research for the Sponsor as 'verrichter' in the meaning of said Act in each year of insurance coverage.

The insurance applies to the damage that becomes apparent during the study or within 4 years after the end of the study.

14.13 Patient Compensation

Patients will not receive any compensation for their participation to this study. However, they may be reimbursed for travel expenses following local requirements.

15. STUDY DURATION

The overall duration of the study will be approximately 36 months. It is estimated that the inclusion period will be up to 12 months.

Each patient will then be followed-up for 24 months following implantation of the device.

16. PUBLICATION POLICY

Institution and Investigator may freely publish and disseminate the results of their investigative findings hereunder and shall solely determine the authorship and contents (including scientific conclusions and professional judgments) of any such paper. Institution or Investigator, as the case may be, shall provide Sponsor with a copy of the papers prepared for publication by it, him/her or any sub-investigators at the earliest practicable time, but in any event not less than thirty (30) days prior to their submission to a scientific journal or presentation at scientific meetings and a reasonably detailed summary or abstract of any other oral or written publication not less than thirty (30) days prior to their submission or presentation. Sponsor may comment upon, but may not make any editorial changes to, the results and conclusions set forth in the papers; however, if identified by Sponsor, any Sponsor Confidential Information that may be contained therein shall be deleted. Sponsor personnel shall be acknowledged in accordance with customary scientific practice. Sponsor may freely use, copy and disseminate any such manuscript following its publication without further obligation to Institution or Investigator.

Because the Study is part of a multi-center study, the Institution and Investigator agree that they will not publish until after the data from the multi-center study is published in a combined paper that identifies all the sites that participated in the study. In the event that the multi-center publication has not been completed within one (1) year from the date of the completion or termination of the multi-center study, Institution may publish or present its individual results, provided that the paper, oral disclosure or other written presentation is first reviewed by Sponsor in accordance with above

17. REFERENCES

1 Stanworth A. Conjunctival fibrosis after filtration operations. Trans Opthal Soc U K 1958;78:43-55.

2 Tribin-Piedrahita A. Ibid 1965;60:140.

3 Rollet M. Le drainage au irin de la chambre anterieure contre l'hypertonic et la douleur. Rev Gen Ophthalmol 1906;25:481.

4 Bock RH. Subconjunctival drainage of the anterior chamber by a glass seton. Am J Ophthalmol 1950;33:929-33.

5 Steffanson J. An operation for glaucoma. Am J Ophthalmol 1925;8:681-92.

6 Zorab A. The reduction of tension in chronic glaucoma. Ophthalmoscope 1912;10:258.

7 Molteno AC. New implant for drainage in glaucoma. Animal trial. Br J Ophthalmol 1969;53:161-8.

8 Molteno AC. New implant for drainage in glaucoma. Clinical trial. Br J Ophthalmol 1969;53:606-15.

9 Molteno AC, Straughan JL, Ancker E. Long tube implants in the management of glaucoma. S Afr Med J 1976;50:1062-6.

10 Prata JA, Jr., Mermoud A, LaBree L, Minckler DS. In vitro and in vivo flow characteristics of glaucoma drainage implants. Ophthalmology 1995;102:894-904.

11 Krupin T, Podos SM, Becker B, Newkirk JB. Valve implants in filtering surgery. Am J Ophthalmol 1976;81:232-5.

12. Coleman AL, Hill R, Wilson MR, et al. Initial clinical experience with the Ahmed Glaucoma Valve implant. Am J Ophthalmol 1995;120:23-31.

13. Molteno AC. The optimal design of drainage implants for glaucoma. Trans Ophthalmol Soc N Z 1981;33:39-41.

14. Lloyd MA, Baerveldt G, Heuer DK, et al. Initial clinical experience with the Baerveldt implant in complicated glaucomas. Ophthalmology 1994;101:640-50.

15. Siegner SW, Netland PA, Urban RC, Jr., et al. Clinical experience with the Baerveldt glaucoma drainage implant. Ophthalmology 1995;102:1298-307.

16 Helies P, Legeais JM, Savoldelli M, et al. Artificial trabeculum (MESH). Clinical and histological study in the rabbit. J Fr Ophtalmol 1998;21:351-60.

17 Kondo H, Fantes F, Kato H, et al. Synthetic meshwork implant for glaucoma filtering surgery: effect of adjunct heparin and sodium hyaluronate in rabbits. Ophthalmic Surg Lasers 1998;29:669-76.

18. Pandya AD, Rich C, Eifrig DE, Hanker J, Peiffer RL. Experimental evaluation of a hydroxylapatite reservoir tube shunt in rabbits. Ophthalmic Surg Lasers. 1996 Apr;27(4):308-14).

19. Nyska A, Glovinsky Y, Belkin M, Epstein Y. Biocompatibility of the Ex-PRESS miniature glaucoma drainage implant. J Glaucoma 2003;12:275-80.

20. Wilcox MJ, Barad JP, Wilcox CC, et al. Performance of a new, low-volume, high-surface area aqueous shunt in normal rabbit eyes. J Glaucoma 2000;9:74-82.

21. Chen PP, Yamamoto T, Sawada A, et al. Use of antifibrosis agents and glaucoma drainage devices in the American and Japanese Glaucoma Societies. J Glaucoma 1997;6:192-196.

22. Joshi AB, Parrish RK, Feuer WF. 2002 Survey of the American Glaucoma Society. Practice preferences for glaucoma surgery and antifibrotic use. J Glaucoma 2005;14:172-174.

23. Minckler DS, Heuer DK, Hasty B, et al. Clinical experience with the single-plate Molteno implant in complicated glaucomas. Ophthalmoloy 1988;95:1181-1188.

24. Freedman J, Rubin B. Molteno implants as a treatment for refractory glaucoma in black patients. Arch Ophthalmol 1991;109:1417-1420.

25. Lloyd MA, Sedlak T, Heuer DK, et al. Clinical experience with single plate Molteno implant in complicated glaucomas. Update of a pilot study. Ophthalmology 1992;99:679-687.

26. Heuer DK, Lloyd MA, Abrams DA, et al. Which is better? One or two? A randomized clinical trial of single-plate versus double-plate Molteno implantation for glaucomas in aphakia and pseudophakia. Ophthalmology 1992;99:1512-1519.

27. Hodkin MJ, Goldblatt WS, Burgoyne CF, et al. Early clinical experience with the Baerveldt implant in complicated glaucomas. Am J Ophthalmol 1995;120:32-40.

28. Mills RP, Reynolds A, Emond MJ, et al. Long-term survival of Molteno glaucoma drainage devices Ophthalmology 1996;103:299-305.

29. Huang MC, Netland PA, Coleman AL, et al. Intermediate-term clinical experience with the Ahmed glaucoma valve implant. Am J Ophthalmol 1999;127:27-33.

30. Broadway DC, Iester M, Schulzer M, Douglas GR. Survival analysis for success for Molteno tube implants. BR J Ophthalmol 2001;85:689-695.

31. Roy S, Ravinet E, Mermoud A. Baerveldt implant in refractory glaucoma: long-term results and factors influencing outcomes> Int Ophthalmol 2001;24:93-100.

32. Chihara E. Kubota H, Takanashi T, Nao-I N. Outomce of White pump shunt surgery for neovascular glaucoma in Asians. Ophthalmic Surg 1992;23:666-671.

33. Bluestein EC, Stewart WC. Trabeculectomy with 5-fluorouracil vs single plate Molteno implantation. Ophthalmic Surg 1993;24:669-673.

34. The Fluorouracil Filtering Surgery Study Group. Fluorouracil Filtering Surgery Study one-year follow-up. Am J Ophthalmolol 1989;108:625-635.

35. The Fluorouracil Filtering Surgery Study Group. Fluorouracil Filtering Surgery Study three-year follow-up. Am J Ophthalmol 1993;115:82-92.

36. Heuer DK, Parrish RK, Gressel MG, et al. 5-fluorouracil and glaucoma filtering surgery: II. A pilot study. Ophthalmology 1984;91:384-394.

37. Heuer DK, Parrish RK, Gressel MG, et al. 5-fluorouracil and glaucoma filtering surgery: III. Intermediate follow-up of a pilot study. Ophthalmology 1986;93:1537-1546.

38. Weinreb RN. Adjusting the dose of 5-fluorouracil after filtration surgery to minimize side effects. Ophthalmology 1987;94:564-570.

39. Palmer SS. Mitomycin as adjunct chemotherapy with trabeculectomy. Ophthalmology 1991;98:317-321.

40. Prata JA, Minckler DS, Baerveldt G, et al. Trabeculectomy in pseudophakic patients: postoperative 5-fluorouracil versus intraoperative mitomycin C antiproliferative therapy. Ophthalmic Surg 1995;26:73-77.

41. Chen CW, Huang HT, Bair JS, Lee CC. Trabeculectomy with simultaneous topical application of mitomycin-C in refractory glaucoma. J Ocular Pharmacol 1990;6:175-182.

42. Singh J, O'Brien C, Chawla HB. Success rate and complications of intraoperative 0.2 mg/ml mitomycin C in trabeculectomy surgery. Eye 1995;9:460-466.

43. Andreanos D, Georgopoulos GT, Vergados J, et al. Clinical evaluation of the effect of mitomycin-C in re-operation for primary open angle glaucoma. Eur J Ophthalmol 1997;7:49-54.

44. You YA, Gu YS, Fang CT, Ma XQ. Long-term effects of simultaneous and subscleral mitomycin C application in repeat trabeculectomy. J Glaucoma 2002;11:110-118.

45. Mangione CM, Lee PP, Gutierrez PR, et al. Development of the 25-item National Eye Institute visual function questionnaire. Arch Ophthalmol 2001;119:1050-1058.

46. Gedde SJ, Schiffman JC, Feuer WJ, Parrish RK, Heuer DK, Brandt JD The Tube Versus Trabeculectomy Study: Design and Baseline Characteristics of Study Patients. Am J Opthalmol 2005; 140: 275- 287.

47. Gedde SJ, Schiffman JC, Feuer WJ, Parrish RK, Heuer DK, Brandt JD and The Tube Versus Trabeculectomy Study Group. Surgical Complications in the Tube Versus Trabeculectomy Study During the First Year of Follow-up. Am J Ophthalmol 2007;143:23-30.

48. Gedde SJ, Schiffman JC, Feuer WJ, Parrish RK, Heuer DK, Brandt JD and The Tube Versus Trabeculectomy Study Group. Treatment Outcomes in the Tube Versus Trabeculectomy Study After One Year of Follow-up. Am J Ophthalmol 2007;143:9-22.

49. Gedde SJ, Schiffman JC, Feuer WJ, Parrish RK, Heuer DK, Brandt JD and The Tube Versus Trabeculectomy Study Group. Three-Year Follow-up of the Tube Versus Trabeculectomy Study. Am J Ophthalmol 2009;148:670-684.

50. Maris Jr, P, Ishida K, and Netland PA. Comparison of Trabeculectomy With Ex-PRESS Miniature Glaucoma Device Implanted Under Scleral Flap. J Glaucoma 2007;16:14-19.

51. de Jong Leo. The Ex-PRESS Glaucoma Shunt versus Trabeculectomy in Open-Angle Glaucoma: a Prospective Randomized Study. Adv Ther 2009;26(3):336-345.

18. ANNEX A: List of definitions: Potential glaucoma implant surgery-related complications

- Anesthesia-related Complications

Anesthesia related complications can occur during any surgery in which anesthesia is involved. In local peribulbar or retrobulbar anesthesia, the main concerns are related to perforation, injury of optic nerve, and bleeding in the orbit. No patients will receive general anesthesia.

- Anterior Capsule Puncture

During surgery, it could be possible to puncture the anterior capsule, and this would allow aqueous to leak out and lead to decreased IOP (hypotony).

- Anterior Chamber Entry

If there is leak of fluid at the entry site, this would allow aqueous to leak out and lead to decreased IOP (hypotony)

- Aqueous Humor Misdirection

Obstruction to the flow of aqueous at the ciliary body and equator of the lens causes aqueous to enter the vitreal space, resulting in forward pressure on the lens and ciliary body.

- Bleb-Related Complications
  - Blebitis - infection of bleb
  - Bleb leak - leak of aqueous through hole in bleb
  - Cystic bleb – surrounded by fibrotic tissue that prevents or limits drainage, bleb may become thick-walled or thin-walled
  - Over-filtering bleb – may cause chronic hypotony
  - Corneal dissecting bleb – extending forward within corneal epithelium

- Cataract

An opacity or haziness of the lens of the eye. A cataract is noticed particularly at night when oncoming headlights produce glare disability or/and discomfort. It may or may not reduce the vision depending on size, density and location. If a cataract reduces visual acuity significantly, an Ophthalmologist can replace the defective lens with an artificial lens
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- Choroidal Effusion

Fluid effusion into the suprachoroidal space has occurred, separating the choroid and all anterior structures from the underlying sclera. Choroidal effusion is the result of a rapid change in the pressure gradient between the venous pressure and the intraocular pressure. Lobular, elevated areas filled with fluid are seen. Detachment and anterior rotation of the ciliary body results in a flattened anterior chamber. Surgical drainage is indicated only in cases involving "kissing choroidals" or lens-cornea adhesion. Pressure patching to elevate

IOP can be considered. The condition will resolve on its own as IOP stabilizes. Cycloplegics and steroids can be used to restore normal vascular permeability and, thus, speed up the process of resolving the condition.

- Conjunctival Dissection

When making the conjunctival pouch, there is always a risk of dissecting the conjunctiva

- Corneal Abrasion

Cornea could be scratched or irritated during surgery. This usually results in pain

- Corneal Decompensation

Cornea can break down if not protected properly

- Corneal Drying

Proper lubrication of the cornea must be maintained

- Corneal Edema

Excess fluid in the cornea

- Decreased Vision (vision loss)

A change in the patient's visual acuity, either near or far, as evidenced by their ability to read on a Monoyer chart

- Endophthalmitis (infection)

An inflammation involving the internal parts of the eye – i.e., choroid, retina, ciliary body and iris. A very serious condition sometimes seen after an injury to the eye by a foreign object. Vision is severely threatened. Large doses of cortisone and antibiotics are often needed. May lead to the removal of the eye. Must be treated by an eye doctor ASAP

- Epiretinal Membrane Proliferation

Fibrocellular membranes that proliferate on the surface of the retina; leads to visual distortion, edema and degeneration of underlying retina

- Extrusion

The tube erodes through the conjunctiva or similar eye membrane

- Flat anterior chamber

Anterior chamber closes due to extreme decrease in IOP (hypotony)

- Globe Perforation

The needle could potential pierce the eyeball during surgery

- Hemorrhage/Bleeding

Blood in the eye, usually from veins or capillaries with compromised endothelium

- Hyphema

Blood in the aqueous fluid - front part of the eye, often caused by an injury. Patient should seek immediate medical attention since a hyphema may lead to glaucoma and permanent loss of vision.

- Hypotony

Decreased Intraocular Pressure

- Inadequate Pain Control

A potential risk after any surgery

- Inappropriate Closure (Risk of Exposure)

Conjunctiva is not closed properly and implant may extrude out

- Increased IOP

Glaucoma usually causes IOP to increase, leading to vision loss

- Injury of cornea or iris with needle

A potential risk during any eye surgery, where needles are used

- Large track (due to wrong needle gauge or movement of needle or patient)

Allows for potential risk of leaks

- Lens Touch

During the surgery, the lens may be touched, which could lead to vision loss or other problems

- Lid Speculum

If lid speculum is left in eye too long during surgery, could lead to temporary paralysis of lid muscle (ptosis)

- Loss of light perception

Patient’s vision may deteriorate to the point where they cannot sense light

- Macular Edema

Fluid accumulates in the macular region from a variety of causes; can lead to vision problems

- Malfunction of release

Tube may not release properly into the eye

- Malignant Glaucoma

Pressure in the posterior chamber is increased, which causes a reverse in the direction of normal aqueous flow; this can lead to blindness

- Mechanical irritation or inflammation

With any eye surgery, there is always a risk of irritation or inflammation

- Migration of tube

Tube moves from intended location; may not function as intended.

- Motility disorder

Any of the intraocular muscles or nerves innervating the intraocular muscles are damaged; this can lead to double vision (diplopia)

- No use of anti-inflammatories, antibiotics or patching when needed

Could lead to inflammation, infection or extrusion of implant

- Obstruction of the tube

Tube may become obstructed by blood, debris or fibrin; this can occur during the procedure and would compromise the function of the tube

- Lack of Sterility

Must maintain effective sterility techniques during surgery to prevent infection

- Proptosis

Proptosis, or exophthalmos, is a forwardly displaced or "bulging" eye. The condition is a sign of an underlying disorder, and not a diagnosis itself. The most common cause of proptosis in adults is Grave's Disease, also known as thyroid related orbitopathy. Other common causes include orbital inflammatory pseudotumor, trauma with hemorrhage behind the eye (retrobulbar hemorrhage), and orbital tumors.

- Retinal Detachment

A retinal detachment occurs when the retina, that part of the eye that contains the photoreceptors, detaches from the underlying layers of cells, called the choroid. A retinal detachment may be the result of injury to the eye such as blunt trauma or it may result from other things like high myopia or age-related macular degeneration. In certain diseases, retinal breaks and tears occur and these may lead to a retinal detachment. Early warning signs

include bright dots or lights or some of your side vision may appear dark. A retinal detachment may be treatable if detected early, so see an Ophthalmologist.

- Shallow Anterior Chamber

Chamber becomes thin, but not completely collapsed or flat (between 0 and 5)

- Suprachoroidal Hemorrhage

Bleeding in the suprachoroidal space

- Tube in contact with iris, cornea, or lens

Could cause inflammation or irritation that could lead to pain or visual problems

- Visual Field Loss

Reduction in the size of the visual field upon follow-up

- Vitreous Hemorrhage

Blood collects inside the vitreous chamber. The most common cause is neovascularization.

- Wound Leak

Leakage from the implant site