# Post Approval Study of the AcrySof<sup>®</sup> IQ ReSTOR<sup>®</sup> Toric IOLs

STUDY ID ILR431b-P001

PROTOCOL v10 September 2, 2020

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**Clinical Trial Protocol** 

# Post Approval Study of the AcrySof® IQ ReSTOR® Toric IOLs

Protocol Number:	ILR431b-P001
Sponsor Name & Address:	Alcon Research, LLC and its affiliates ("Alcon") 6201 South Freeway Fort Worth, Texas 76134-2099
Project Name / Number:	AcrySof IQ ReSTOR Toric 3.0 D add (T3-T6)/255985
Test Article(s) / Product(s):	AcrySof <sup>®</sup> IQ ReSTOR <sup>®</sup> Toric IOLs (AcrySof IQ RESTOR +3.0 D Multifocal Toric IOL, Models SND1T3, SND1T4, SND1T5, SND1T6 and AcrySof IQ RESTOR +2.5 D Multifocal Toric IOLs, Models SV25T3, SV25T4, SV25T5, and SV25T6), and AcrySof IQ ReSTOR +2.5 D Multifocal IOL, Model SV25T0
Investigator Agreement:	I have read the clinical study described herein, recognize its confidentiality, and agree to conduct the described study in compliance with Good Clinical Practice (GCP), ISO 14155, the ethical principles within the Declaration of Helsinki, this protocol, and all applicable regulatory requirements. Additionally, I will comply with all procedures for data recording and reporting, will permit monitoring, auditing, and inspection of my research center, and will retain all records until notified by the Sponsor.

Principal Investigator:

Signature

Date

Name and Investigator Number: Address:

Telephone:

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# **1 PROTOCOL SYNOPSIS**

Financial Disclosure for US FDA Submission Required?	X Yes No
Test Article(s) / Product(s):	ACRYSOF IQ RESTOR +3.0 D Multifocal Toric IOLs (Models SND1T3, SND1T4, SND1T5, and SND1T6) and ACRYSOF IQ RESTOR +2.5 D Multifocal Toric IOLs (Models SV25T3, SV25T4, SV25T5, and SV25T6), ACRYSOF IQ RESTOR +2.5 D Multifocal (Model SV25T0).
	The ACRYSOF IQ RESTOR +3.0 D Multifocal Toric IOL (Models SND1T3/ SND1T4/ SND1T5/ SND1T6) is intended for primary implantation in the capsular bag of the eye for the visual correction of aphakia secondary to removal of a cataractous lens and pre-existing corneal astigmatism in adult patients with and without presbyopia, who desire near, intermediate, and distance vision, reduction of residual cylinder and increased spectacle independence.
	The lens is an ultraviolet and blue light filtering foldable multifocal toric IOL. The optical portion consists of a high refractive index material with proprietary blue light filtering chromophore which filters light in a manner that approximates the human crystalline lens in the 400-475 nm blue light wavelength range. In addition to standard UV absorption, the blue light filtering chromophore reduces transmittance of blue light wavelengths. The optical portion is biconvex and consists of a soft acrylic material capable of being folded prior to insertion, allowing placement through an incision smaller than the optic diameter of the lens. The biconvex optic contains an aspheric apodized diffractive structure on the anterior surface. After surgical insertion into the eye, the lens gently unfolds to restore the optical performance. The anterior surfaces of the ACRYSOF IQ RESTOR +3.0 D Multifocal Toric IOL is designed with negative spherical aberration to compensate for the positive spherical aberration of the cornea. The toric posterior surface is designed to correct pre-existing corneal astigmatism. Alignment of the toric axis marks with the postoperative steep corneal meridian allows the lens to correct pre-existing corneal astigmatism.
	The ACRYSOF IQ RESTOR +2.5 D Multifocal Toric IOLs (Models SV25T3, SV25T4, SV25T5, and SV25T6) are intended for primary implantation in the capsular bag of the eye for the visual correction of aphakia secondary to removal of a cataractous lens and pre-existing corneal astigmatism in adult patients with and without presbyopia, who desire reduction of refractive cylinder and near, intermediate, and distance vision with increased spectacle independence.

The lens is an ultraviolet and blue light filtering foldable multifocal toric IOL. The optical portion consists of a proprietary high refractive index hydrophobic acrylic material with a blue light filtering chromophore which filters light in a manner that approximates the human crystalline lens in the 400-475 nm blue light wavelength range. The optical portion is biconvex and consists of a soft acrylic material capable of being folded prior to insertion, allowing placement through an incision smaller than the optic diameter of the lens. After surgical insertion into the eye, the lens gently unfolds to restore the optical performance. The biconvex optic contains an aspheric apodized diffractive structure with a central refractive zone on the anterior surface and a toric posterior surface. The apodized diffractive structure divides incoming light to provide a range of functional vision (defined as visual acuity of 20/40 or better) from distance to near. The anterior surface of the ACRYSOF IQ RESTOR +2.5 D Multifocal Toric IOL Models SV25T3 through SV25T6 is designed with negative spherical aberration to compensate for the positive spherical aberration of the cornea. The toric posterior surface is designed to correct pre-existing corneal astigmatism. Alignment of the toric axis marks with the postoperative steep corneal meridian allows the lens to correct pre-existing corneal astigmatism. The effects of this aspheric design feature have not been clinically assessed. Compared to other Alcon ACRYSOF IQ RESTOR Multifocal Toric IOL models (Models SND1T3 to SND1T6), these IOLs (Models SV25T3 to SV25T6) provide an alternate option for clinicians to offer patients with astigmatism with the near add power of +2.5 D, with optimal vision at 53 cm and greater distance dominance in the energy distribution between near and far. The ACRYSOF IQ RESTOR +2.5 D Multifocal IOL (Model SV25T0) is intended for primary implantation in the capsular bag of the eye for the visual correction of aphakia secondary to removal of a cataractous lens in adult patients with and without presbyopia, who desire reduction of near, intermediate, and distance vision with increased spectacle independence. The lens is an ultraviolet and blue light filtering foldable multifocal

The lens is an ultraviolet and blue light filtering foldable multifocal IOL. The optical portion consists of a proprietary high refractive index hydrophobic acrylic material with a blue light filtering chromophore which filters light in a manner that approximates the human crystalline lens in the 400-475 nm blue light wavelength range. The optical portion is biconvex and consists of a soft acrylic material capable of being folded prior to insertion, allowing placement through an incision smaller than the optic diameter of the lens. After surgical insertion into the eye, the lens gently unfolds to restore the optical performance. The biconvex optic contains an aspheric apodized diffractive structure with a central refractive zone on the anterior surface and a posterior surface. The apodized

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	diffractive structure divides incoming light to provide a range of functional vision (defined as visual acuity of 20/40 or better) from distance to near. The anterior surface of the ACRYSOF IQ RESTOR +2.5 D Multifocal IOL Model SV25T0 is designed with negative spherical aberration to compensate for the positive spherical aberration of the cornea. The effects of this aspheric design feature have not been clinically assessed. Compared to other Alcon ACRYSOF RESTOR Multifocal IOL models (Models SN6AD1, MN6AD1 and SN6AD3), this IOL (Model SV25T0) provides an alternate option for clinicians to offer patients with the near add power of +2.5 D, with optimal vision at 53 cm and greater distance dominance in the energy distribution between near and far.
Objective(s):	To report the rate of post-surgical intraocular inflammation (based upon a specified case definition) reported within a 180-day post-surgical period following attempted implantation of an ACRYSOF IQ RESTOR Toric or ACRYSOF IQ RESTOR IOL in the US.
Clinical Study Design:	This is a prospective, multicenter, post-approval active surveillance study.
No. of Eyes:	<ul> <li>Cohort 1: Adult subjects implanted with an ACRYSOF IQ RESTOR</li> <li>Toric Multifocal IOL (+3.0 D or +2.5 D) in at least one eye</li> <li>Enrolled: 478 Subjects</li> <li>Implanted: 706 eyes</li> <li>Completed: 703 eyes</li> </ul> Cohort 2: Adult subjects implanted with an ACRYSOF IQ RESTOR <ul> <li>+3.0 D Multifocal Toric IOL or ACRYSOF IQ RESTOR +2.5 D</li> <li>Multifocal IOL in at least one eye</li> <li>Enroll: Approximately 3600 eyes</li> <li>Implant: Approximately 3300 eyes</li> <li>Required for statistical analysis: 3000 completed eyes</li> </ul>
Region(s):	US
Clinical Study Duration:	<ul> <li>a) Total expected duration of the clinical investigation: Approximately 50 months</li> <li>b) Expected duration of each subject's participation: Approximately 7 months per participating eye</li> </ul>
	c) Planned follow up duration: 180 days per participating eye

		d) Estimated time nee enrollment period): A	ded to select the number of eyes (ie, pproximately 47 months	
Clinical Study Population:		Cohort 1: Adult subjects, 22 years of age or older, implanted from November 2018 through July 2020 with an ACRYSOF IQ RESTOR Multifocal Toric IOL (+3.0 D or +2.5 D)		
		Cohort 2: Adult subje July 2020 with an AC IOL or ACRYSOF IQ	cts, 22 years of age or older, implanted after RYSOF IQ RESTOR +3.0 D Multifocal Toric RESTOR +2.5 D Multifocal IOL	
Treatments:		Test Articles:	ACRYSOF IQ RESTOR +3.0 D Multifocal Toric IOLs (Models SND1T3, SND1T4, SND1T5, and SND1T6)	
			ACRYSOF IQ RESTOR +2.5 D Multifocal Toric IOLs (Models SV25T3, SV25T4, SV25T5, and SV25T6)	
			ACRYSOF IQ RESTOR +2.5 D Multifocal (Model SV25T0)	
		Administration:	Routine small incision cataract surgery with IOL implantation.	
		General Description:	A range of commonly utilized spherical powers (diopters) will be available.	
		Duration of Treatment:	Intraocular lenses are implantable medical devices and are intended for long term use over the lifetime of the cataract subject.	
		Control Article:	N/A	
		Administration:	N/A	
		General Description:	N/A	
		Duration of Treatment:	N/A	
Inclusion & Exclusion Criteria:		Details can be found in Section 10: Subject Population		
Performance	N/A			
	Slit-	lamp examination		
	Prob	Problems during surgery		
Safety	Intra	Intraocular pressure (IOP)		
	Aqu	queous cell		
	Aqu	queous flare		
	Corneal edema			

	Corneal haze
	Fibrin in anterior chamber, on the surface of the iris or on the IOL
	Eyelid edema
	Conjunctival hyperemia
	Ciliary flush
	Corneal precipitates
	Нуроруоп
	Adverse events
	Device deficiencies
	Dilated Fundus Exam
	Vitreous haze
	Vitreous cell
	Subject Reported Symptoms
	Best Corrected Visual Acuity
Other	N/A

### Planned Analysis

### Safety data set

Safety set includes all eyes with attempted test article implantation (successful or aborted after contact with the eye). The safety set will be used for all safety analyses including the primary safety endpoint analysis. Modified safety set includes all eyes with successful test article implantation. The modified safety set will be used for a sensitivity analysis of the primary safety endpoint.

### Primary Safety:

The rate of post-surgical intraocular inflammation (based upon the specified case definition) reported within a 180-day post-surgical period following attempted implantation of an ACRYSOF IQ RESTOR Toric IOL or ACRYSOF IQ RESTOR IOL (Cohort 2) in the US will be estimated along with the exact two-sided 95% confidence interval (CI). The event rate (per 1,000 IOL implants) is

Total # of reported events / Total # of implants × 1,000.

A subgroup analysis on the primary safety endpoint will be performed by age group (22-64 years vs. 65 years or older). If both eyes of a subject are enrolled in this study, full follow-up information for both eyes will be used in the primary analysis. As sensitivity analyses, two cumulative event rates at 180 days and the corresponding two-sided 95% confidence interval will be provided using Kaplan-Meier estimator:

• Full follow-up information for both eyes is used

• If a subject has a second cataract surgery within 180 days of the occurrence of the first cataract surgery, the follow-up for the first eye will be censored at the time of second surgery

Secondary Safety:

The rates of Toxic Anterior Segment Syndrome, acute postoperative endophthalmitis, chronic postoperative endophthalmitis, and uncategorized cases of post-surgical intraocular inflammation (based upon the specified case definition), respectively, reported within a 180-day post-surgical period following implantation of ACRYSOF IQ RESTOR Toric IOL or ACRYSOF IQ RESTOR IOL (Cohort 2) in the US will be estimated along with the exact two-sided 95% CI.

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# **3 ABBREVIATIONS**

Abbreviation	Definition
ADE	Adverse device effect
AE	Adverse event
ASADE	Anticipated serious adverse device effect
BCVA	Best corrected visual acuity
CI	Confidence interval
CFR	Code of Federal Regulations
CRF	Case report form
СМ	Clinical Manager
cm	Centimeter
CSM	Clinical Site Manager
D	Diopters
DFU	Directions for use
eCRF	Electronic case report form
EDC	Electronic data capture
FDA	US Food and Drug Administration
GCP	Good Clinical Practice
IEC	Independent ethics committee
ICF	Informed consent form
IRB	Institutional review board
IOL	Intraocular lens
IOP	Intraocular pressure
ISO	International Organization for Standardization
LCSM	Lead Clinical Site Manager
MD	Doctor of medicine
MedDRA®	Medical Dictionary for Regulatory Activities
mm	Millimeters
МОР	Manual of procedures
Ν	Number
N/A	Not applicable
nm	Nanometer
PAS	Post-approval study
PMA-S	Premarket approval supplement
SAE	Serious adverse event
SADE	Serious adverse device effect
SOP	Standard operating procedures
SSI	Secondary surgical intervention
TASS	Toxic Anterior Segment Syndrome
UNSV	Unscheduled visit
US	United States
USADE	Unanticipated serious adverse device effect
UV	Ultraviolet
WHO	World Health Organization

# 4 GLOSSARY OF TERMS

Adverse Device Effect (ADE)	Adverse event related to the use of an investigational medical device or comparator, if applicable. <i>Note: This definition includes adverse</i> <i>events resulting from insufficient or inadequate instructions for use,</i> <i>deployment, implantation, installation, or operation; any</i> <i>malfunction; and use error or intentional misuse of the</i> <i>investigational medical device or comparator, if applicable.</i>
Adverse Event (AE)	Any untoward medical occurrence, unintended disease or injury, or untoward clinical signs (including abnormal laboratory findings) in subjects, users or other persons, whether or not related to the investigational medical device. <i>Note: For subjects, this definition</i> <i>includes events related to the investigational medical device or the</i> <i>procedures involved. For users or other persons, this definition is</i> <i>restricted to events related to investigational medical devices.</i>
Anticipated Serious Adverse Device Effect (ASADE)	Serious adverse device effect which by its nature, incidence, severity, or outcome has been identified in the risk analysis.
Assessment	A procedure used to generate data required by the study.
Device Deficiency	Inadequacy of a medical device with respect to its identity, quality, durability, reliability, safety, or performance. <i>Note: This definition includes malfunctions, misuse or use errors, and inadequate labeling.</i>
Exposed	The investigational product touched the subject's eye
Performance (Clinical)	Behavior of a medical device or response of the subject to that medical device in relation to its intended use, when correctly applied to appropriate subjects.
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 clinical investigation plan.
Nonserious Adverse Event	Adverse event that does not meet the criteria for a serious adverse event.
Period	A minor subdivision of the study timeline; divides phases into smaller functional segments such as screening, baseline, operative, postoperative, etc.
Serious Adverse Device Effect (SADE)	Adverse device effect that has resulted in any of the consequences characteristic of a serious adverse event.

Serious Adverse	Adverse event that led to any of the following:
Event (SAE)	• Death.
	• A serious deterioration in health that either resulted in:
	• a life-threatening illness or injury. Note: Life-threatening means that the individual was at immediate risk of death from the event as it occurred, ie, it does not include an event which hypothetically might have caused death had it occurred in a more severe form.
	• any potentially sight-threatening event or permanent impairment to a body structure or a body function.
	<ul> <li>in-patient hospitalization or prolonged hospitalization. Note: Planned hospitalization for a pre-existing condition, or a procedure required by the clinical investigation plan, without serious deterioration in health, is not considered a serious adverse event. In general, hospitalization signifies that the individual remained at the hospital or emergency ward for observation and/or treatment (usually involving an overnight stay) that would not have been appropriate in the physician's office or an out-patient setting. Complications that occur during hospitalization are AEs. If a complication prolongs hospitalization or fulfills any other serious criteria, the event is serious. When in doubt as to whether "hospitalization" occurred, the event should be considered serious.</li> </ul>
	• a medical or surgical intervention to prevent a) or b).
	• any indirect harm as a consequence of incorrect diagnostic test results when used within manufacturer's instructions for use.
	• Fetal distress, fetal death, or a congenital abnormality or birth defect.
Subject Number	A number assigned to each subject who enrolls in the study. When combined with the site number, a unique identifier is created for each subject in the study.
Unanticipated Serious Adverse Device Effect (USADE)	Serious adverse device effect which by its nature, incidence, severity or outcome has not been identified in the risk analysis.








































## **6** SCHEDULE OF VISITS

Procedure/ Assessment	Visit 0 (≤ 40 days pre-surgery 1 <sup>st</sup> eye, ≤ 60 days pre-surgery 2 <sup>nd</sup> eye)	Visit 00 & Visit 00A (surgery)	Visit 1 & Visit 1A (Day 1-2 post surgery)	Visit 2 & Visit 2A (Day 7-14 post surgery)	Visit 3 & Visit 3A (Day 30- 60 post surgery)	Visit 4 & Visit 4A (Day 90 - 180 post surgery)	UNSV
Informed	Х						
Consent							
Demographics	X						
Patient Medical History (Ocular and Nonocular) <sup>3</sup>	Х						
Medications (use of medication prior to, during and post-surgery must be documented) <sup>3</sup>	Х	Х	Х	Х	Х	Х	Х
Inclusion/	Х	Х					
Adverse Events (Volunteered and Elicited)	Х	X	X	X	X	Х	Х
Device		Х	Х	Х	Х	Х	Х
Subject Reported							
Symptoms	Х		Х	Х	Х	Х	Х
Best Corrected Visual Acuity (BCVA)	Х		Х	Х	Х	Х	х
Intraocular Pressure	Х		Х	Х	Х	Х	Х
Problems during surgery		Х					
Other Surgical Procedures		Х					
Aqueous cell	Х		Х	Х	Х	Х	Х
Aqueous flare	Х		Х	Х	Х	Х	Х
Corneal edema	Х		Х	Х	Х	Х	Х
Corneal haze	Х		Х	Х	Х	Х	Х
Fibrin in the anterior chamber, on the surface of the iris or on the intraocular lens (IOL)	Х		Х	х	Х	х	x
Eyelid edema	Х		Х	Х	Х	Х	Х

Procedure/ Assessment	Visit 0 ( $\leq$ 40 days pre-surgery 1 <sup>st</sup> eye, $\leq$ 60 days pre-surgery 2 <sup>nd</sup> eye)	Visit 00 & Visit 00A (surgery)	Visit 1 & Visit 1A (Day 1-2 post surgery)	Visit 2 & Visit 2A (Day 7-14 post surgery)	Visit 3 & Visit 3A (Day 30- 60 post surgery)	Visit 4 & Visit 4A (Day 90 - 180 post surgery)	UNSV
Conjunctival hyperemia	Х		Х	Х	Х	Х	Х
Ciliary flush	Х		Х	Х	Х	Х	Х
Corneal precipitates	Х		Х	Х	Х	Х	Х
Hypopyon	Х		Х	Х	Х	Х	Х
Dilated fundus examination	Х		$X^1$	$X^1$	$X^1$	$X^1$	X <sup>1</sup>
Vitreous cell	Х		$\mathbf{X}^1$	$\mathbf{X}^1$	$\mathbf{X}^1$	$\mathbf{X}^{1}$	$X^1$
Vitreous haze	Х		X1	X1	$X^1$	X <sup>1</sup>	$X^1$
Photo documentation			X <sup>2</sup>	X <sup>2</sup>	X <sup>2</sup>	X <sup>2</sup>	X <sup>2</sup>
Culture of ocular media			X <sup>2</sup>	X <sup>2</sup>	X <sup>2</sup>	X <sup>2</sup>	X <sup>2</sup>

<sup>1</sup>Required for cases of exacerbated post-surgical intraocular inflammation only.

<sup>2</sup> Required at certain visits for cases of exacerbated post-surgical intraocular inflammation. See Manual of Procedures for details on requirements for which visit(s) testing is required.

<sup>3</sup> Concomitant medications and medical history must be fully documented in the subject source documents. CRF data will be Targeted:

- Medical History: All ocular history, targeted systemic history
- Concomitant Medications: All ocular medications, targeted systemic medications

*NOTE:* Visits with an "A" refer to visits for the  $2^{nd}$  eye visits for cases where both eyes of a subject are enrolled. In the eCRF these visits will be noted with wording of " $2^{nd}$  Eye" instead of A. For example: Visit 1A will be shown as Visit 1- $2^{nd}$  Eye.

# 7 INTRODUCTION

### 7.1 Background

The ACRYSOF IQ RESTOR +3.0 D Multifocal Toric IOL and ACRYSOF IQ RESTOR +2.5 D Multifocal Toric IOL are intended to provide astigmatic cataract patients with a range of near, intermediate and distance vision as well as correct the pre-existing corneal astigmatism by combining multifocal and toric optical designs. ACRYSOF IQ RESTOR +3.0 D Multifocal Toric IOL Models SND1T3 – SND1T6 were approved in the United States on 22 December 2016. The ACRYSOF IQ RESTOR +2.5 D Multifocal Toric IOL Models SV25T3-T6 were approved in the United States on 21 March 2017. The ACRYSOF IQ RESTOR +2.5 D Multifocal IOL Model SV25T0 was approved in the United States on 13 April 2015.

Multifocal IOLs are designed to provide improved overall vision at near and intermediate distances when compared to conventional monofocal IOLs (Javitt 2000, Chiam 2006, Kohnen 2006, Souza 2006, Vingolo 2007, Alfonso 2009). Toric intraocular lenses correct aphakia as well as any pre-existing or surgically induced corneal astigmatism (Horn 2007, Bauer 2008). This provides a benefit to patients due to freedom from spectacles for distance vision which is an important consideration when choosing an intraocular lens (Lane 2006, Larendeau 2009).

A summary of known and potential risks and benefits to humans, as identified in the literature or through preclinical testing and/or prior clinical evaluations, for each investigational product can be found in the Package Insert for the corresponding model.

Risks associated with participation in the clinical investigation including risks associated with the clinical procedure are described in the Informed Consent Form (ICF). Information on alternative treatments that may be available to the subjects is also addressed in the ICF.

# 7.2 Clinical Study Design

This is a prospective, multi-center, active surveillance post-approval study designed to estimate the incidence of post-surgical intraocular inflammation (based upon a specific case definition) in approximately 3,000 eyes that have been implanted with an ACRYSOF IQ RESTOR Toric IOL or ACRYSOF IQ RESTOR Multifocal IOL

for up to 180 days. Active surveillance will be conducted through systematic collection, analysis, and interpretation of all reported cases of post-surgical intraocular inflammation over 4 visits ranging from 1 to 180 days post implantation of the ACRYSOF IQ RESTOR Toric IOL or ACRYSOF IQ RESTOR IOL in the US. The ACRYSOF IQ RESTOR Toric IOL and ACRYSOF IQ RESTOR IOL are commercially available in the United States. This study will include adults ( $\geq$  22 years of age) with preoperative cataract in the study eye(s). Potential subjects will be screened for enrollment into the study. Those qualifying will be considered enrolled in the study at the time the informed consent form is signed, and attend a total of up to 11 visits. The subject will be considered exposed to treatment at the time of surgery when the investigational product touches the eye.

The study includes two groups of subjects (Cohort 1, and Cohort 2).

Cohort 1: Subjects implanted from November 2018 through July 2020 with an ACRYSOF IQ RESTOR +3.0 D Multifocal Toric IOL (Models SND1T3, SND1T4, SND1T5, or SND1T6) or an ACRYSOF IQ RESTOR +2.5 D Multifocal Toric IOL (Models SV25T3, SV25T4, SV25T5, and SV25T6) in at least one eye.

Note: At time of Protocol Amendment 7, Cohort 1 enrollment, is complete.

Cohort 2: Subjects implanted after July 2020 with an ACRYSOF IQ RESTOR +3.0 D Multifocal Toric IOL (Models SND1T3, SND1T4, SND1T5 or SND1T6) or an ACRYSOF IQ RESTOR +2.5 D Multifocal IOL (Model SV25T0) in at least one eye.

Note: This Cohort will include subjects enrolled under Amendment 7.

Interim reports pertaining to the progress of the post-approval study will be submitted to the FDA for review every six months up to the first 2 years, or as requested, starting from the date of approval of the ACRYSOF IQ RESTOR +3.0 D Toric intraocular lens, and will continue to be submitted annually thereafter until study completion.

# 7.3 Rationale for Study Design

This study is designed in accordance with Alcon's agreement with the United States FDA, subsequent to approval of the ACRYSOF IQ RESTOR +3.0 D Multifocal Toric IOL.

This study is being conducted as a post-approval surveillance study to comply with the request of the FDA approval of the AcrySof IQ ReSTOR +3.0 D Multifocal Toric IOL. Enrollment for this study originally started in November 2018.



From November 2018 to November 2019 a total of 706 eyes in 478 subjects were successfully implanted with ReSTOR Toric IOLs

These subjects comprise Cohort 1 and have been followed as defined in this protocol through their last study visit.

Note: At time of Protocol Amendment 7, Cohort 1 enrollment, including subjects implanted and followed from November 2018 through July 2020, is complete.

At the request of the FDA, Alcon is restarting enrollment in this study and all future subjects (approximately 3300) will be implanted with ACRYSOF ReSTOR Toric IOLs or ACRYSOF ReSTOR IOLs

These newly enrolled subjects will be Cohort 2 and will make up the primary study population.

### 7.4 Study Milestones Timeline

The study milestone timeline presented below is based upon the expectation that, following the initiation of the first site for enrolling each Cohort, the remaining study sites will be activated at a rate of approximately 5 per month, and the enrollment rate at activated sites will be approximately 6 eyes per month.

Key Milestone	Target Date (Cohort 1)	Target Date (Cohort 2)	
First Site Initiated	November 2018	October 2020	
First Subject First Visit	November 2018	October 2020	
Last Subject First Visit	November 2019	June 2022	
Last Subject Last Visit	July 2020	January 2023	
Database Lock	July 2020	January 2023	
Submit PAS Final Report	April 2023		

Table 7–1Study Milestones



# 8 CLINICAL STUDY OBJECTIVES

## 8.1 Primary Objective

The primary objective is to report the rate of post-surgical intraocular inflammation (based upon a specified case definition) reported within a 180-day post-surgical period following attempted implantation of an ACRYSOF IQ RESTOR Toric IOL or ACRYSOF IQ RESTOR IOL in the US.

## 8.2 Secondary Objectives

Not applicable

### 8.3 Exploratory Objectives

Not applicable

### 8.4 Study Endpoints

### 8.4.1 Performance Endpoints

There are no performance endpoints in this study.

### 8.4.2 Safety Endpoints

The **primary safety endpoint** is the rate (per 1,000 IOL implants) of post-surgical intraocular inflammation (based upon the specified case definition) reported within a 180-day post-surgical period following attempted implantation of ACRYSOF IQ RESTOR Toric +3.0 D Multifocal IOL or ACRYSOF IQ RESTOR +2.5 D Multifocal IOL (Cohort 2).

The specific case definition of post-surgical intraocular inflammation is as follows.

Exacerbated intraocular inflammation within 180 days after IOL implantation as indicated by:

- ≥ 3+ aqueous cell within the first 14 days post-op (collected at Visit 1 or 2 or at an unscheduled visit between Visit 00 and Visit 2), and/or
- ≥ 2+ aqueous cell > 14 days and ≤ 60 days post-op (collected on Visit 3 or at an unscheduled visit between Visit 2 and Visit 3), and/or
- ≥ 1+ aqueous cell > 60 days post-op or later (collected on Visit 4 or at an unscheduled visit between Visit 3 and Visit 4)

The **secondary safety endpoints** are the rates (per 1,000) of Toxic Anterior Segment Syndrome (TASS), acute postoperative endophthalmitis, chronic postoperative endophthalmitis, and uncategorized cases of post-surgical intraocular inflammation (based upon the specified case definition), respectively, reported within a 180-day post-surgical period following implantation of ACRYSOF IQ RESTOR Toric IOLs or ACRYSOF IQ ReSTOR IOL (Cohort 2).

The case definitions of TASS and endophthalmitis are as follows:

Exacerbated intraocular inflammation within 180 days after IOL implantation associated with the following findings:

#### TASS

- $\geq$  3+ aqueous cell
- Non-infectious etiology
- Rapid onset (up to and including 2 days postoperatively)

#### ACUTE POSTOPERATIVE ENDOPHTHALMITIS

- $\geq$  3+ aqueous cell
- Etiology
  - Infectious per positive culture of ocular media
  - Non-infectious per negative culture of ocular media
- Inflammatory cells in the vitreous and/or vitreous abscess.
- Rapid onset (3 to 14 days postoperatively)

#### CHRONIC POSTOPERATIVE ENDOPHTHALMITIS

- $\geq 1 +$  aqueous cell
- Etiology
  - Infectious per positive culture of ocular media
  - Non-infectious per negative culture of ocular media
- Inflammatory cells in the vitreous
- Delayed onset (> 14 days postoperatively)

#### UNCATEGORIZED

- Exacerbated intraocular inflammation within 180 days after IOL implantation as indicated by:
  - ≥ 3+ aqueous cell within the first 14 days post-op (collected on Visit 1 or 2 or at an unscheduled visit between Visit 00 and Visit 2), and/or

- ≥2+ aqueous cell > 14 days and ≤ 60 days post-op (collected on Visit 3 or at an unscheduled visit between Visit 2 and Visit 3), and/or
- ≥ 1+ aqueous cell > 60 days post-op or later (collected on Visit 4 or at an unscheduled visit between Visit 3 and Visit 4).

but does not meet the definitions for TASS, acute postoperative endophthalmitis, or chronic postoperative endophthalmitis given above.

# 9 INVESTIGATIONAL PLAN

### 9.1 Outline of Clinical Study

This is a prospective, multi-center, active surveillance post-approval study, designed to estimate the incidence of post-surgical intraocular inflammation (based upon a specific case definition) in approximately 3,000 eyes that have been implanted with an ACRYSOF IQ RESTOR Toric IOL or ACRYSOF IQ RESTOR IOL (Cohort 2) for up to 180 days.

## 9.2 Study Design

The study will include adults ( $\geq$  22 years of age) who plan to have cataract extraction and subsequent implantation of an ACRYSOF IQ RESTOR +3.0 D Toric Multifocal IOL (Models SND1T3, SND1T4, SND1T5 or SND1T6) or an ACRYSOF IQ RESTOR +2.5 D Toric IOL (Models SV25T3, SV25T4, SV25T5, and SV25T6) or an ACRYSOF IQ RESTOR +2.5 D Multifocal IOL (Model SV25T0) in at least one eye. Potential subjects will be screened for eligibility and enrollment into the study. In Cohort 1, 706 eyes were implanted, and approximately 3600 eyes will be screened, to identify 3300 qualified eyes in Cohort 2. Within 40 days of screening, qualified subjects will receive cataract surgery followed by implantation at the surgery visit with one of the study IOLs for their Cohort as follows:

Cohort 1: Subjects implanted from November 2018 through July 2020 with an ACRYSOF IQ RESTOR +3.0 D Multifocal Toric IOL (Models SND1T3, SND1T4, SND1T5, or SND1T6) or an ACRYSOF IQ RESTOR +2.5 D Multifocal Toric IOL (Models SV25T3, SV25T4, SV25T5, and SV25T6) in at least one eye.

Cohort 2: Subjects implanted after July 2020 with an ACRYSOF IQ RESTOR +3.0 D Multifocal Toric IOL (Models SND1T3, SND1T4, SND1T5, or SND1T6) or an ACRYSOF IQ RESTOR +2.5 D Multifocal IOL (Model SV25T0) in at least one eye.

If a second eye will participate in the study, subjects will receive the second eye cataract surgery within 60 days of the screening Visit 0. Four postoperative follow-up visits are planned to occur at 1-2 days, 7-14 days, 30-60 days, and 90-180 days, for each enrolled eye. Subject participation in this study is expected to last up to 7 months, including a total of 6 study visits for subjects implanted in one eye and up to 11 visits for subjects implanted in both eyes. Upon completion of the 180 days follow-up visit, subjects will be exited from the study.

Time From Implantation	1 <sup>st</sup> Implant	2 <sup>nd</sup> Implant
Pre-surgery	Visit 0	-
Surgery	Visit 00	Visit 00A
1-2 days	Visit 1	Visit 1A
7-14 days	Visit 2	Visit 2A
30-60 days	Visit 3	Visit 3A
90-180 days	Visit 4	Visit 4A

#### Table 9–1Visit Schedule for 1st and 2nd Implant

## 9.3 Rationale for Study Design

This study is designed in accordance with Alcon's agreement with the United States FDA, subsequent to approval of the ACRYSOF IQ RESTOR +3.0 D Multifocal Toric IOL.

### 9.4 Procedures Per Study Visit

Section 12, Clinical Study Procedures, contains procedures per study visits.

### 9.5 Risk Benefit Assessment

The ACRYSOF IQ RESTOR +3.0 D Multifocal Toric IOL is intended for primary implantation in the capsular bag of the eye for the visual correction of aphakia secondary to removal of a cataractous lens and pre-existing corneal astigmatism in adult patients with and without presbyopia, who desire near, intermediate and distance vision, reduction of residual refractive cylinder and increased spectacle independence. The lens is intended to be placed in the capsular bag.

The ACRYSOF IQ RESTOR +2.5 D Multifocal Toric IOLs (Models SV25T3, SV25T4, SV25T5, and SV25T6) are intended for primary implantation in the capsular bag of the eye for the visual correction of aphakia secondary to removal of a cataractous lens and pre-existing corneal astigmatism in adult patients with and without presbyopia, who desire reduction of refractive cylinder and near, intermediate, and distance vision with increased spectacle independence.

The ACRYSOF IQ RESTOR +2.5 D Multifocal IOLs (Model SV25T0) are intended for primary implantation in the capsular bag of the eye for the visual correction of aphakia secondary to removal of a cataractous lens in adult patients with and without presbyopia, who desire near, intermediate, and distance vision with increased spectacle independence.

During the development of ACRYSOF IQ RESTOR Toric IOL, the safety and performance aspects of the device have been evaluated using risk analysis techniques, and clinical hazards are addressed by the pivotal clinical study data.

In the pivotal clinical study for the ACRYSOF IQ RESTOR +3.0 D Multifocal Toric IOL, the safety and performance of ACRYSOF IQ RESTOR +3.0 D Multifocal Toric IOL was demonstrated. The study results demonstrated that the benefit of ACRYSOF IQ RESTOR +3.0 D Toric IOL implantation at the time of cataract surgery in subjects with aphakia and pre-existing corneal astigmatism outweigh its risks. FDA's approval was obtained on 22 December 2016 for commercial distribution.

No pivotal clinical study for the ACRYSOF IQ RESTOR +2.5 D Multifocal Toric IOL was conducted. However, the pivotal clinical study for the non-toric ACRYSOF IQ RESTOR +2.5 D IOL (SV25T0) in conjunction with the pivotal clinical study for ACRYSOF IQ RESTOR +3.0 D Toric IOL (T3-T6) demonstrate safety and performance of the ACRYSOF IQ RESTOR +2.5 D Toric IOL. Both studies show the benefit of the ACRYSOF IQ RESTOR +2.5 D Toric IOL, which outweigh its risks. FDA approval was obtained on 21 March 2017.

The pivotal clinical study for the ACRYSOF IQ RESTOR +2.5 D Multifocal IOL (SV25T0 demonstrated safety and performance of the ACRYSOF IQ RESTOR +2.5 D Multifocal IOL. and showed the benefit of the ACRYSOF IQ RESTOR +2.5 D Multifocal IOL outweigh its risks. FDA approval was obtained on 13 April 2015.

In accordance with order, this post-approval study is being conducted to provide continued reasonable assurance of safety of the ACRYSOF IQ RESTOR +3.0 D Toric IOL.

In the post-approval clinical study, a careful evaluation will be performed according to the inclusion/exclusion criteria to ensure that vulnerable or inappropriate subjects are not allowed to participate in the clinical study. Subject safety will be monitored closely via the collection

of adverse events, and safety parameter assessments at postoperative visits (either planned or unscheduled) throughout the course of the study.

Overall, the information that will be gained in the post-approval study will provide continued evidence supporting safety of the device.

## 9.6 Study Recruitment and Entry

Participants will be recruited from the Investigators' patient population, referrals, or IRB approved materials. Patients that appear to be eligible subjects will be approached for study participation and sign an Informed Consent Form (ICF) prior to the commencement of study related procedures.

The Investigator or designee will explain the study purpose, procedures and subject responsibilities to the potential participant. The subject must be given the opportunity to ask questions and allowed time to consider the information provided. The subject's willingness and ability to meet the follow-up requirements will be determined. When it has been established that the subject is eligible for possible participation in the study, written informed consent will be obtained. Upon signing the ICF, the subject will be enrolled into the study. The original signed informed consent form will be retained within the subject's medical records, and a copy will be provided to the subject.

# **10 SUBJECT POPULATION**

The study population includes two Cohorts (Cohort 1 and 2) to be implanted at approximately 30 sites. To participate in the clinical study, subjects must be 22 years of age or older and have planned implantation in at least one eye with one of the study IOLs for their Cohort as follows:

Cohort 1: Subjects implanted from November 2018 through July 2020 with an ACRYSOF IQ RESTOR +3.0 D Multifocal Toric IOL (Models SND1T3, SND1T4, SND1T5, or SND1T6) or an ACRYSOF IQ RESTOR +2.5 D Multifocal Toric IOLs (Models SV25T3, SV25T4, SV25T5, and SV25T6) in at least one eye, in accordance with the product labeling.

Note: At time of Protocol Amendment 7 Cohort 1 enrollment, is complete.

Cohort 2: Subjects implanted after July 2020 with ACRYSOF IQ RESTOR +3.0 D Multifocal Toric IOL (Models SND1T3, SND1T4, SND1T5 or SND1T6) or an ACRYSOF IQ RESTOR +2.5 D Multifocal IOL (Model SV25T0) in at least one eye, in accordance with the product labeling.

Note: This Cohort will include subjects enrolled under Amendment 7.

The subject must not have ocular or intraocular infection or inflammation at the screening visit or on the day of surgery, nor any history of intraocular inflammation within the past 12 months. A subject can have one eye or both eyes enrolled in the study if the eye(s) meets the required qualifications. Additional entry criteria are listed below in Sections 10.1 and 10.2. The study enrollment period is expected to last approximately 43 months.

Check all entry criteria at screening/pre-surgery (Visit 0) and at both surgical visits (Visit 00, Visit 00A). If a subject reschedules surgery, resulting in the pre-surgery study assessments (Visit 0) falling outside of the required window; the pre-surgery study assessments should be repeated and inclusion/exclusion criteria re-verified. Subjects failing to pass entry criteria may not be re-screened.

### **10.1 Inclusion Criteria**

Below is a list of the inclusion criteria. Assessments must be performed at screening (Visit 0), unless otherwise indicated.

1. Adults, 22 years of age or older, of either gender or any race, with preoperative cataract in the study eye(s).

2. Subjects with planned implantation in at least one eye with:

Cohort 1: an ACRYSOF IQ RESTOR +3.0 D Multifocal Toric IOL (Models SND1T3, SND1T4, SND1T5 or SND1T6) or an ACRYSOF IQ RESTOR +2.5 D Multifocal Toric IOLs (Models SV25T3, SV25T4, SV25T5, and SV25T6) in accordance with the product labeling from November 2018 to July 2020

Cohort 2: an ACRYSOF IQ RESTOR +3.0 D Multifocal Toric IOL (Models SND1T3, SND1T4, SND1T5 or SND1T6), or an ACRYSOF IQ RESTOR +2.5 D Multifocal IOL (Model SV25T0) in accordance with the product labeling after July 2020. [Note: powers supplied are +15.0 D to +25.0 D in 0.5 D increments.]

- 3. Able to comprehend and sign a statement of informed consent
- 4. Willing and able to complete all required postoperative visits

### **10.2 Exclusion Criteria**

Below is a list of exclusion criteria.

- 1. Eyes with clinically significant ocular, including adnexa, or intraocular infection or inflammation (at the screening visit prior to surgery or on the day of surgery)
- 2. Subjects with a history of any intraocular inflammation within the past 12 months (ex: uveitis, choroiditis)
- 3. Combined procedures introducing an additional medical device during cataract surgery (ex: cataract surgery with implant of glaucoma stent)

# **11 TREATMENT**

Upon signing the informed consent form, subjects are considered enrolled in the study. All enrolled subjects will be assigned a unique subject identifier at the screening visit, which will be used throughout the clinical study. The subject identifier consists of a combination of a four digit Investigator number and a five-digit subject number (Cohort 1) and a five digit Investigator number and a five-digit subject number (Cohort 2). The number is automatically generated sequentially by the EDC system. As an example: "1234.00001" or "01234.00001" (the Investigator number and subject number are separated by a "." character).

Subjects are considered exposed to treatment in the study at the time of surgery, when the investigational product touches the eye. Throughout the clinical study, the Investigator will be responsible for ensuring that the investigational products are used in accordance with product labeling.

### **11.1 Investigational Products**

Test Articles: ACRYSOF IQ RESTOR +3.0 D Multifocal Toric IOL (Models SND1T3, SND1T4, SND1T5 or SND1T6), ACRYSOF IQ RESTOR +2.5 D Toric IOL (Models SV25T3, SV25T4, SV25T5, and SV25T6), and ACRYSOF IQ RESTOR +2.5 D Multifocal IOL (Model SV25T0) manufactured by Alcon Laboratories, Inc. These products are approved by FDA in United States.

The ACRYSOF IQ RESTOR Toric IOL is intended for primary implantation in the capsular bag of the eye for the visual correction of aphakia and pre-existing corneal astigmatism secondary to removal of a cataractous lens in adult patients with and without presbyopia, who desire near, intermediate, and distance vision, reduction of residual refractive cylinder, and increased spectacle independence. The test articles are manufactured by Alcon Laboratories, Inc., are of single piece construction, and have a 6.0 mm diameter biconvex optic and an overall length of 13.0 mm. The haptics are made of the same material as the optic with no angulation. ACRYSOF IQ RESTOR +3.0 D Toric IOL (Models SND1T3, SND1T4, SND1T5 or SND1T6) will be available in lens power ranges 10.0 D to 30.0 D (Cohort 1) and 15.0 D to 25.0 D (Cohort 2) in 0.5 D increments. ACRYSOF IQ RESTOR +2.5 D Multifocal Toric IOLs (Models SV25T3, SV25T4, SV25T5, and SV25T6) will be available in lens power ranges 6.0 D to 30.0 D in 0.5 D increments for Cohort 1 only. Note: At time of Protocol Amendment 7, Cohort 1 enrollment is complete. The posterior surface of the ACRYSOF IQ RESTOR Toric IOL is marked with six indentations (three on either side) on the flatter meridian of the optic. These indentations on the periphery of the optic are to be aligned with the axis determined by the Alcon Online Toric IOL Calculator (http://www.myalcon-toriccalc.com).

The ACRYSOF IQ RESTOR IOL is intended for primary implantation in the capsular bag of the eye for the visual correction of aphakia secondary to removal of a cataractous lens in adult patients with and without presbyopia, who desire near, intermediate, and distance vision and increased spectacle independence. The test articles are manufactured by Alcon Laboratories, Inc., are of single piece construction, have a 6.0 mm diameter biconvex optic and an overall length of 13.0 mm. The haptics are made of the same material as the optic with no angulation. ACRYSOF IQ RESTOR +2.5 D Multifocal IOLs (Model SV25T0) will be available in lens power ranges 15.0 D to 25.0 D in 0.5 D increments for Cohort 2 enrollment.

Each IOL will have a unique serial number. The IOL package will contain:

The IOL,

A subject registration card (Lens Implant Card)

A subject identification card to be given to the subject after surgery,

Adhesive labels containing the IOL information (including the unique serial number)

A package insert containing directions for use

#### **Control Article: Not applicable.**

There is no control article in this study.

#### 11.2 Usage

The AcrySof IQ ReSTOR Toric Intraocular Lens (IOL) is intended for primary implantation in the capsular bag of the eye for the visual correction of aphakia and pre-existing corneal astigmatism secondary to removal of a cataractous lens in adult patients with and without presbyopia, who desire near, intermediate, and distance vision, reduction of residual refractive cylinder and increased spectacle independence. The lens is intended to be placed in the capsular bag.

The AcrySof IQ ReSTOR IOL is intended for primary implantation in the capsular bag of the eye for the visual correction of aphakia secondary to removal of a cataractous lens in adult patients with and without presbyopia, who desire near, intermediate, and distance vision with increased spectacle independence. It is recommended to implant ACRYSOF IQ RESTOR +2.5 D Multifocal IOL in subjects with < 1.0 D astigmatism.

In order to implant the test article, the surgeons participating in the study must be licensed ophthalmologists with cataract surgery experience. Each surgeon will use his/her standard of care to implant the lens following the Package Insert/DFU for the device.

**NOTE:** If problems during surgery occur or other surgical procedures are performed prior to implanting the IOL, determine whether the lens should be implanted as recommended in the product DFU and Inclusion/Exclusion criteria listed in Section 10

## 11.3 Supply

The Sponsor will provide a consignment of the ACRYSOF IQ RESTOR +3.0 D Multifocal Toric IOL (Models SND1T3, SND1T4, SND1T5 or SND1T6) and ACRYSOF IQ RESTOR +2.5 D Multifocal IOL (Model SV25T0) to each investigative site free of charge for Cohort 2 only in the ranges described in Table 11-1.

#### Table 11-3 ACRYSOF IQ RESTOR IOL Models and Optic Power Ranges

IOL Model	Optic Powers supplied
RESTOR +3.0 D Multifocal Toric IOL (Models SND1T3, SND1T4, SND1T5 or SND1T6)	+15.0 D to 25.0 D ( 0.5 D increments)
RESTOR +2.5 D Multifocal IOL (Model SV25T0)	+15.0 D to 25.0 D ( 0.5 D increments)

The Investigator is responsible for maintaining the consignment, ensuring that an adequate number of IOLs are available in each dioptric power provided by the Sponsor. To obtain additional IOLs, the Investigator must contact the Sponsor.

Storage instructions for the study IOLs can be found in the ACRYSOF IQ ReSTOR +3.0 D Multifocal Toric IOL and AcrySof IQ ReSTOR +2.5 D Multifocal IOL package inserts.

## 11.4 Dispensing

The Investigator is to keep a current record of dispensing of all test articles. This record will be made available to the Sponsor's monitor to account for all test articles.

If an Investigative Site has more than one study surgeon, each surgeon (maximum of 4 per site) will be assigned a surgeon number (eg, 01, 02) and this will be documented on the appropriate log. If the Investigative Site has only one surgeon his/her surgeon number is 01.

## **11.5 Accountability Procedures**

Upon receipt of the IOLs for Cohort 2, the Investigator or delegate must conduct an inventory of the IOLs by serial number, complete study specific confirmation of receipt procedures as described in the MOP, and retain any required documentation in the Investigator's clinical study records. Throughout the study, the Investigator or delegate must maintain records of IOL use/dispensation for each subject. This record must be made available to the study monitor for the purposes of verifying the accounting of IOL supplies. Any discrepancies and/or deficiencies between the observed disposition and the written account must be recorded along with an explanation. All IOLs sent to the Investigator must be accounted for by Study Sponsor personnel, and in no case be used in an unauthorized manner.

The Investigator is responsible for proper disposition of all unused IPs at the conclusion of the study, according to the instructions provided in the MOP.

# 11.6 Return of Test Article

All damaged lenses, explanted lenses, unused lenses, or lenses that meet device deficiency criteria must be packaged in a biohazard bag and returned to the Sponsor with the appropriate return forms. Refer to Section 13 for additional information on reporting any device deficiencies and associated adverse events.

# **12 CLINICAL STUDY PROCEDURES**

### 12.1 Clinical Study Assessments

The following section outlines the assessments to be performed in this clinical study. It is recommended that ocular assessments be performed in the order presented below. All assessments must be recorded in the source documentation, and also in the eCRF, if applicable.

Assessments are described in detail in the ILR431b-P001 Manual of Procedures (hereto referred to as the MOP), and are outlined in tabular format in Section 6 of this protocol.

# 12.1.1 Screening/Pre-surgery Visit (Visit 0)

Below is a list of study procedures to be undertaken at Visit 0, which must take place within 40 days prior to the date of 1<sup>st</sup> eye surgery or within 60 days prior to the date of 2<sup>nd</sup> eye surgery. Screen each eye that is planned to be included in the study.

*Note:* Procedures that are completed as part of standard of care for routine cataract evaluation prior to study consent may be used if performed per protocol and within the required window.

1. Upon identification of a potential study participant, carry out the informed consent process. Refer to Section 16.2 Informed Consent Procedures.

*NOTE:* Subjects must formally consent to participate in the study before undergoing any study specific testing.

- 2. Document demographics, ocular and nonocular medical history, and concomitant medications
- 3. Collect subject reported symptoms
- 4. Obtain subject Best Corrected Visual Acuity (BCVA)
- 5. Assess intraocular pressure (IOP)
- 6. Conduct a slit-lamp examination (refer to the MOP for grading scales). Assess the following:
  - Aqueous cell
  - Aqueous flare
  - Corneal edema
  - Corneal haze

- Fibrin in the anterior chamber or on the surface of the iris
- Eyelid edema
- Conjunctival hyperemia
- Ciliary flush
- Corneal precipitates
- Hypopyon
- 7. Conduct a dilated fundus exam (see MOP for details) ensuring grading of:
  - Vitreous cells
  - Vitreous haze
- 8. Verify eligibility per the study inclusion/exclusion criteria
- 9. Assess for adverse events

Following confirmation of eligibility per the study inclusion/exclusion criteria, subjects will be scheduled for surgery (Visit 00/Visit 00A) within the required window of screening (Visit 0). Ineligible subjects must be exited from the study. The reason for exit must be documented for each subject. Refer to Section 12.4 for further detail.

### 12.1.2 Surgery Visit (Visit 00/Visit 00A)

Surgery will take place after the subject successfully completes all screening assessments and is confirmed eligible to participate in the study per inclusion/exclusion requirements, but not more than 40 days for the 1<sup>st</sup> eye (or 60 days for the 2<sup>nd</sup> eye) after the date of the screening/pre-surgery visit (Visit 0). Only qualified surgeons listed on the study delegation log (maximum of 4 per site) can perform the surgery on a study patient. The following study procedures must be performed at the Surgery Visit:

- 1. Review and document any changes in medical history since the last visit
- 2. Review and document concomitant medications
- 3. Verify eligibility to continue participation per the study inclusion/exclusion criteria
- 4. Perform cataract surgery and implantation of the ACRYSOF IQ RESTOR IOL per routine standard of care (RESTOR Toric +3.0 or RESTOR +2.5 provided by the Sponsor for Cohort 2)

- 5. Document any problems during surgery, as applicable
- 6. Assess for adverse events and device deficiencies

Note: If subject is having surgery in the second eye also, some visit windows may overlap if the surgery occurs within 7 days to 30 days after surgery in the first eye.

The visit schedule for the first and second implant can be found in Table 9-1.

#### **12.1.3** Postoperative Visits

Postoperative visits are to take place as follows:

- Visit 1 and Visit 1A: Day 1-2 post-surgery
- Visit 2 and Visit 2A: Day 7-14 post-surgery
- Visit 3 and Visit 3A: Day 30-60 post-surgery
- Visit 4 and Visit 4A: Day 90-180 post-surgery/Early Exit/Exit

The following study procedures must be performed at each postoperative visit:

- 1. Review and document any changes in medical history since the last visit
- 2. Review and document concomitant medications
- 3. Collect subject reported symptoms
- 4. Obtain subject Best Corrected Visual Acuity (BCVA)
- 5. Assess IOP
- 6. Conduct a slit-lamp examination (refer to the MOP for grading scales). Assess the following:
  - a. Aqueous cell
  - b. Aqueous flare
  - c. Corneal edema
  - d. Corneal haze
  - e. Fibrin in the anterior chamber, on the surface of the iris or on the IOL
  - f. Eyelid edema
  - g. Conjunctival hyperemia
  - h. Ciliary flush

- i. Corneal precipitates
- j. Hypopyon

Note: For cases of exacerbated post-surgical intraocular inflammation, additional testing is required:

- Dilated fundus examination with vitreous haze grading and vitreous cell grading
- Photo documentation, anterior and posterior(if applicable) see MOP for details on which visits testing is required
- Culture of ocular media, required if infection suspected see MOP for details on when testing is required
- 7. Assess for adverse events and device deficiencies

### **12.2** Unscheduled Visits

An unscheduled visit (UNSV) is defined as follows:

- Ocular examination that is not standard of care and not required by the protocol;
- Examination conducted by the study staff;
- New findings, or a change to a previous finding was discovered; and
- Not site standard of care/routine

An UNSV may or may not result in the capture of an adverse event. Likewise an adverse event may be captured without the report of an UNSV (eg, AE identified subsequent to study eye examination by non-study personnel).

The assessments captured at the UNSV are dictated by the Investigator per his/her medical judgement. The following assessments are recommended:

- Review and document any changes in medical history since the last visit
- Review and document concomitant medications
- Collect subject reported symptoms
- Obtain subject BCVA
- Assess IOP

- Conduct a slit-lamp examination (refer to the MOP for grading scales). Assess the following:
  - Aqueous cell
  - Aqueous flare
  - Corneal edema
  - Corneal haze
  - $\circ$  Fibrin in the anterior chamber, on the surface of the iris or on the IOL
  - Eyelid edema
  - Conjunctival hyperemia
  - Ciliary flush
  - Corneal precipitates
  - o Hypopyon

Note: For cases of exacerbated post-surgical intraocular inflammation, additional testing is required:

- Dilated fundus examination with vitreous haze grading and vitreous cell grading
- Photo documentation, anterior and posterior(if applicable) see MOP for details on which visits testing is required
- Culture of ocular media, required if infection suspected see MOP for details on when testing is required
- Assess for adverse events and device deficiencies

Assessments and documentation are not limited to the above list. For safety purposes, if an unscheduled visit is required after the final study visit, document the visit.

### 12.3 Missed Visits

If a subject misses a scheduled visit, reschedule the subject within the same visit period. The Investigator must show diligence in trying to schedule the subject for all study visits, and document all attempts to contact the subject. In documentation, include the date, time, method of contact, etc.

If a subject is unable to return for the final study visit, complete the Exit eCRF with the appropriate reason for discontinuation. If attempts to contact the subject are unsuccessful, document the date the subject is considered lost to follow-up. Complete the subjects Exit

eCRF after the last window (Visit 4/Visit 4A) closes, indicating the subject is lost to follow-up.

### **12.4 Discontinued Subjects**

Subjects may be discontinued (exited) from the study early due to:

- Failure to meet protocol eligibility criteria prior to surgery
- Adverse event(s)
- Administrative reasons (eg, voluntary withdrawal, lost to follow-up)

Subjects who fail to meet protocol eligibility criteria prior to the investigational product touching the eye will not be followed beyond the date of determination of ineligibility. Implanted subjects and subjects with failed implantation (inability to successfully insert the study IOL) will be followed until the planned end of the study period.

Discontinued subjects who have been implanted or in whom implantation failed will not be replaced. Notification of a subject's early discontinuation should be made immediately to the Sponsor and documented on the appropriate eCRF.

If a subject exits the study before completion of the final, planned study visit (Visit 4/Visit 4A), the Investigator should make reasonable attempts to have the subject return to the site to perform early exit procedures. Early exit procedures are all study procedures to be conducted at Visit 4/Visit 4A (see Section 12.1.3).

# 12.5 Clinical Study Termination

The Sponsor reserves the right to close the investigational site or terminate the study in its entirety at any time, for reasonable cause. The Investigator also may terminate the study at his/her site for reasonable cause. Reasons for the closure of an investigational site or termination of the study may include:

- The Investigator fails to comply with the protocol or GCP guidelines
- Safety concerns
- Inadequate recruitment of subjects by the Investigator

If the clinical study is prematurely terminated or suspended, the Sponsor will inform the Investigator and the regulatory authorities (where applicable) of the termination/suspension, and the reason for the termination/suspension. The Investigator should promptly notify the IRB of the termination or suspension and the reasons. If the Sponsor terminates the study for safety reasons, it will immediately notify the Investigator(s), and provide written instructions for study termination and applicable subject follow-up.

# **13 DEVICE DEFICIENCIES AND ADVERSE EVENTS**

# **13.1 General Information**

An Adverse Event (AE) is any untoward medical occurrence in a subject who is administered a clinical study treatment (ie, implant with an investigational device) regardless of whether or not the event has a causal relationship with the treatment. An AE, therefore, can be any unfavorable or unintended sign (including an abnormal laboratory finding), symptom, or disease temporally associated with the clinical study treatment, whether or not related to the treatment. Below are Figures that categorize AEs and SAEs.

Figure 13–1 Categorization of All Adverse Events



Figure 13–2

Categorization of All Serious Adverse Events



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#### Serious Adverse Events

A serious adverse event is an AE that led to any of the following:

- Death
- A serious deterioration in the health of the subject that either resulted in:
  - a) a life-threatening illness or injury.

Note: Life-threatening means that the individual was at immediate risk of death from the event as it occurred, ie, it does not include an event which hypothetically might have caused death had it occurred in a more severe form.

- b) any potentially sight-threatening event or permanent impairment to a body structure or a body function.
- c) in-patient hospitalization or prolonged hospitalization. Note: Planned hospitalization for a pre-existing condition, without serious deterioration in health, is not considered a SAE. In general, hospitalization signifies that the individual remained at the hospital or emergency ward for observation and/or treatment (usually involving an overnight stay) that would not have been appropriate in the physician's office or an out-patient setting. Complications that occur during hospitalization are AEs. If a complication prolongs hospitalization or fulfills any other serious criteria, the event is serious. When in doubt as to whether "hospitalization" occurred, the event should be considered serious.
- d) a medical or surgical intervention to prevent a) or b) or any ocular secondary surgical intervention (excluding posterior capsulotomy).
- e) any indirect harm as a consequence of incorrect diagnostic test results when used within manufacturer's instructions for use.
- Fetal distress, fetal death, or a congenital abnormality or birth defect.

Any other potentially sight-threatening events may also be considered serious based upon the judgment of the Investigator and should be reported appropriately as delineated in Section 13.3.

#### Adverse Device Effect

An adverse device effect (ADE) is an AE related to the use of an investigational product (test article). This definition includes AEs resulting from insufficient or inadequate instructions for use, deployment, implantation, installation, or operation; any malfunction; and use error or intentional misuse of the test article.

#### Serious Adverse Device Effect

A serious adverse device effect (SADE) is an ADE that has resulted in any of the consequences characteristic of a SAE.

#### Anticipated Serious Adverse Device Effect

An anticipated serious adverse device effect (ASADE) is a SADE which by its nature, incidence, severity, or outcome has been identified in the risk analysis report.

#### Unanticipated Serious Adverse Device Effect

An unanticipated serious adverse device effect (USADE) is a SADE which by its nature, incidence, severity or outcome has not been identified in the risk analysis report.

#### Device Deficiencies

A device deficiency is an inadequacy of a medical device with respect to its identity, quality, durability, reliability, safety, or performance. This definition includes malfunctions, use errors, and inadequate labeling. Malfunction is defined as a failure of a medical device to perform in accordance with its intended purpose when used in accordance with the instructions for use or clinical investigation plan. Use error is defined as an act or omission of an act that results in a different medical device response than intended by manufacturer or expected by user; this includes slips, lapses, and mistakes. An unexpected physiological response of the subject does not in itself constitute a use error.

A device deficiency may or may not be associated with patient harm (ie, ADE or SADE); however, not all ADEs or SADEs are due to a device deficiency. The Investigator should determine the applicable category for the identified or suspect device deficiency and report any patient harm separately. Examples of device deficiencies include the following:

- Failure to meet product specifications (eg, incorrect IOL power)
- IOL defect
- Broken IOL optic

- Broken IOL haptic
- Scratched IOL optic
- Unsealed device packaging
- Suspect IOL contamination
- Lack of efficacy

Return any IOL associated with a device deficiency to the Study Sponsor. Refer to the MOP for information on return of study IOLs.

# 13.2 Specific Events Relevant to this Protocol

In addition to reporting all AEs meeting the above definitions, the Investigator must report the following AEs:

Exacerbated intraocular inflammation as indicated by:

- ≥ 3+ aqueous cell within the first 14 days post-op (collected on Visit 1 or 2 or at an unscheduled visit between Visit 00 and Visit 2), and/or
- ≥ 2+ aqueous cell > 14 days and ≤ 60 days post-op (collected on Visit 3 or at an unscheduled visit between Visit 2 and Visit 3), and/or
- ≥ 1+ aqueous cell > 60 days post-op or later (collected on Visit 4 or at an unscheduled visit between Visit 3 and Visit 4).

Note: Cases of exacerbated intraocular inflammation should be categorized by the Investigator according to Section 8.4.2.

Subject reported symptoms should be assessed to determine if they meet the definition of an AE per Section 13.1 of the protocol. Symptoms associated with an AE should be captured as part of the AE in the narrative as appropriate.

# 13.3 Procedures for Recording and Reporting

All AEs will be documented on the Adverse Event case report form (CRF) and collected on a routine basis at monitoring visits. Surgically-related postoperative conditions that are normal consequences of the ocular surgery and not clinically relevant will only be reported as adverse events at the discretion of the Investigator.

In addition, the Investigator must document all ADEs, SAEs, and device deficiencies with details including the date of occurrence, severity, treatment (if applicable), outcome, and assessments of the seriousness and causality. All available information must be submitted to

the study Sponsor immediately (ie, within 24 hours of the Investigator's or site's knowledge of the event) as follows:

- ADEs, SAEs, or device deficiencies must be entered immediately into the EDC system.
- Additional relevant information after initial reporting should be updated in the EDC system as soon as it becomes available.

Study Sponsor contact information is provided in the Manual of Procedures (MOP).

Further, depending upon the nature of the AE or device deficiency being reported, the study Sponsor may request copies of applicable portions of the subject's medical records. The Investigator must also report all AEs and device deficiencies that could have led to a SADE according to the requirements of regulatory authorities or IRB/IEC.

#### **Intensity and Causality Assessments**

For every AE and device deficiency, the Investigator must assess the causality as Related or Not Related to the medical device or test procedure in the study. An assessment of causality will also be performed by a study Sponsor physician utilizing the same definitions, as shown below:

#### Causality

- Related An AE or device deficiency classified as related may be either definitely related or possibly related where a direct cause and effect relationship with the medical device or test procedure has not been demonstrated, but there is a reasonable possibility that the AE or device deficiency was caused by the medical device or test procedure.
- Not Related An AE or device deficiency classified as not related may either be definitely unrelated or simply unlikely to be related (ie, there are other more likely causes for the AE or device deficiency).

Where appropriate, the Investigator must assess the intensity (severity) of the AE as mild, moderate, or severe, based upon medical judgment with consideration of any subjective symptom(s), as defined below:

#### Intensity (Severity)

Mild	An AE is mild if the subject is aware of but can easily tolerate the sign or symptom.
Moderate	An AE is moderate if the sign or symptom results in discomfort significant enough to cause interference with the subject's usual activities.
Severe	An AE is severe if the sign or symptom is incapacitating and results in the subject's inability to work or engage in their usual activities.

The Investigator must document any action taken (ie, medication, intervention, or treatment plan) and outcome of the AE or device deficiency when applicable.

### 13.4 Unmasking of the Study Information

Not applicable; this study is open-label.

### 13.5 Follow-Up of Safety Information

The Investigator is responsible for adequate and safe medical care of subjects during the study and for ensuring that appropriate medical care and relevant follow-up procedures are maintained after the study. Any additional data from these follow-up procedures must be documented and available upon the study Sponsor's request.

# **14 DATA REVIEW AND HANDLING**

### 14.1 Completion of Source Documents and Case Report Forms

The nature and location of all source documents must be identified to ensure that original data required to complete the eCRFs exist and are accessible for verification by the monitor. Data reported on the eCRFs must be derived from source documentation, be consistent with source documentation, and any discrepancies must be explained in writing. At a minimum, source documentation must include the following information for each subject:

- Subject identification (name, sex)
- Documentation of subject eligibility
- Date of informed consent, and a copy of the signed consent form
- Dates of visits
- Documentation that protocol-specific procedures were performed
- Results of study assessment, as required by the protocol
- Documentation of AEs and other safety parameters (as applicable)
- Records regarding medical histories and the use of concomitant therapies prior to and during the study
- Date of study completion and reason for early discontinuation (if applicable)

It is required that the author of each entry in the source documents be identifiable (eg, initials or signature and date). Any change or correction to data reported in the source, or on an eCRF, must be dated, initialed, and explained if necessary. Changes must not obscure the original entry (ie, an audit trail must be maintained). Direct access to source documentation (medical records) must be allowed for the purpose of verifying that the data recorded on the eCRF are consistent with the original source data.

EDC is designated for data collection and should be completed by designated individuals only. Required examinations must be recorded in the eCRFs. All data reported must have corresponding entries in the source documents. The Investigator will review the reported data and certify that the eCRFs are accurate and complete as indicated by signature. Subject identifiers must not be recorded on the eCRFs beyond subject number, demographics information, and/or other study identifiers.

Deviations from this protocol, regulatory requirements, and Good Clinical Practice (GCP) must be recorded in the study records. An explanation of the deviation should be included, as

applicable. In addition, corrective and preventative action should be identified, implemented and documented within the study records.

### 14.2 Data Review and Clarifications

Upon completion of the eCRFs, targeted data will be reviewed by the assigned Sponsor global clinical site management (CSM), or designee, team for accuracy and completeness. The planned source document verification and overall monitoring activities for this study are outlined in a separate document, the Protocol Monitoring Plan. Corrections and/or any necessary additions to the data will be applied and if required, queries will be generated. Designated investigative staff are expected to respond to data queries in a timely manner and ensure that the corrections and changes made to the data are reflected in the subjects' source documentation. Deviations from this protocol, regulatory requirements and GCP must be recorded. An explanation of the deviation should be included, as applicable. In addition, corrective and preventive action should be identified, implemented and documented within the study records. Prior to study start, a plan for data validation will be completed by Alcon clinical data management (or designee), and agreed upon by the study clinical manager (CM) and other team members.

Medical history and adverse events will be coded using the medical dictionary for regulatory activities (MedDRA) terminology. Upon completion of the study and once the database is declared completed and accurate, the database will be locked and data will be available for data analysis. Any changes to the database after lock will be implemented upon agreement between the Sponsor's clinical study management, medical safety clinical data management and biostatistics departments, and will be completed following the Sponsor's procedures for changes to a database after database lock.

# **15 ANALYSIS PLAN**

# 15.1 Subject Evaluability

Subject evaluability will be determined prior to locking the database for each cohort accordingly, based upon the Deviations and Evaluability Plan (DEP).

# 15.2 Analysis Data Sets

The safety set includes all eyes with attempted test article implantation (successful or aborted after contact with the eye). The safety set will be used for all safety analyses

Modified safety set

includes all eyes with successful test article implantation. The modified safety set will be used for a sensitivity analysis of the primary safety endpoint. Second eye surgery within 6 months of the occurrence of first cataract surgery will be included in the primary analysis. If both eyes of a subject are enrolled in this study, full follow-up information from both eyes will be used in the primary analysis.

The above definition applies to both Cohort 1 and Cohort 2. Unless otherwise specified, analyses described below will be reported only for Cohort 2.

# **15.3 Demographics and Baseline Characteristics**

Summary statistics will be provided for demographic and baseline characteristics for each cohort. Number and percentage will be presented for categorical variables and descriptive statistics including mean, standard deviation, median, minimum and maximum will be presented for continuous variables.

# **15.4 Performance Analyses**

Not applicable. This is a post-approval safety study of the ACRYSOF IQ RESTOR Toric IOL.

# **15.4.1 Primary Performance**

Not applicable.

# 15.4.1.1 Statistical Hypotheses

Not applicable.
### 15.4.1.2 Analysis Methods

Not applicable.

### **15.4.2** Secondary Performance

Not applicable.

### **15.4.2.1** Statistical Hypotheses

Not applicable.

### 15.4.2.2 Analysis Methods

Not applicable.

### **15.4.3 Supportive Performance**

Not applicable.

### 15.4.3.1 Statistical Hypotheses and Model

Not applicable.

### 15.4.3.2 Analysis Methods

Not applicable.

### 15.5 Handling of Missing Data

The safety set does not include any imputed values for missing data.

### **15.6 Multiplicity**

Not applicable. This is a post-approval safety study of the ACRYSOF IQ RESTOR Toric IOL.

### 15.7 Safety Analysis

For primary safety, the rate of post-surgical intraocular inflammation (based upon the specified case definition) reported within a 180-day post-surgical period following implantation of study IOLs (Cohort 2) in the United States will be estimated along with the exact two-sided 95% confidence interval. The event rate (per 1,000 IOL implants) is calculated as:

### Total # of reported events/Total # of implants x 1,000

A subgroup analysis on the primary safety endpoint will be performed by age groups (22-64 years vs. 65 years or older). If both eyes of a subject are enrolled in this study, full follow-up information for both eyes will be used in the primary analysis. As sensitivity analyses, two cumulative event rates at 180 days and the corresponding two-sided 95% confidence interval will be provided using Kaplan-Meier estimator:

- Full follow-up information for both eyes is used
- If a subject has a second cataract surgery within 180 days of the occurrence of the first cataract surgery, the follow-up for the first eye will be censored at the time of second surgery

For secondary safety, the rates of Toxic Anterior Segment Syndrome, acute postoperative endophthalmitis, chronic postoperative endophthalmitis, and uncategorized cases of post-surgical intraocular inflammation (based upon the specified case definition) reported within a 180-day post-surgical period following implantation of study IOLs (Cohort 2) in the United States will be estimated along with the exact two-sided 95% confidence interval.

### **Adverse Events**

All information obtained on adverse events will be displayed by subject and eye.

The number and percentage of all ocular adverse events, including secondary surgical interventions (SSIs) for either eye, will be tabulated by preferred term with a breakdown by implanted eye and overall. An eye with multiple ocular adverse events of the same preferred term is only counted once toward the total of this preferred term.

Nonocular adverse events will be tabulated by preferred term.

### **Device Deficiencies**

The number and percentage of all device deficiencies will be tabulated with a breakdown by implanted eye and overall. A listing of all device deficiencies will also be provided.

### **Other Safety Assessments**

All other safety assessments (including surgical problems, slit-lamp examination, postsurgical anterior segment inflammation, aqueous cell, aqueous flare, hypopyon, corneal edema, corneal haze, fibrin in the anterior chamber, fibrin on the surface of the iris, fibrin on the intraocular lens, dilated fundus exam, inflammatory cells or haze in the vitreous, subject reported symptoms, and best corrected visual acuity) will be summarized. Summaries of continuous variables will include the number of observations, mean, standard deviation, median, minimum and maximum. Summaries of categorical variables will include the number of eyes with data for the variable, as well as the number and percentage of eyes in each category for the variable.

### **15.8 Interim Analyses**

Interim reports pertaining to the progress of this study will be submitted to the FDA for review every six months up to the first two years, or as requested, starting from the date of approval of the ACRYSOF IQ RESTOR Toric IOLs, and will continue to be submitted annually thereafter until study completion.

For each interim report, the number of eyes enrolled, the number of eyes with an attempted implantation and the number of eyes with implantation of the ACRYSOF IQ RESTOR study IOLs will be reported. In addition, the rates for post-surgical intraocular inflammation, Toxic Anterior Segment Syndrome, acute postoperative endophthalmitis, chronic postoperative endophthalmitis, and uncategorized cases of post-surgical intraocular inflammation will be reported, and a listing of all such events will be provided. A listing of all ocular SAEs will also be provided.

### 15.9 Adaptive Study Design

Not applicable.

### **15.10 Sample Size Justification**

The precision of the estimated rate can be assessed using the width of an exact two-sided 95% confidence interval. In Figure 15-1, the exact two-sided 95% confidence intervals with a sample size (N) of 3,000 are shown when the observed rate ranges from 1 to 10 (per 1,000). As an example, with N = 3,000, the width of the exact two-sided 95% confidence will be 3.6 (per 1,000) when the observed rate is 2 (per 1,000).

# Figure 15-1The exact two-sided 95% confidence intervals with N = 3,000 when<br/>the observed rate ranges from 1 to 10 (per 1,000)



### **16 ADMINISTRATIVE PROCEDURES**

### 16.1 Regulatory and Ethical Compliance

This clinical study will be conducted in accordance with the principles of the Declaration of Helsinki, and in compliance with ISO 14155:2011 Clinical investigation of medical devices for human subjects – Good clinical practice, Code of Federal Regulations (CFR), Standard Operating Procedures (SOPs) of Alcon and Contract Research Organizations participating in the conduct of the clinical study, and all other applicable regulations. The Investigator and all clinical study staff will conduct the clinical study in compliance with this protocol. The Investigator will ensure that all personnel involved in the conduct of the clinical study are qualified to perform their assigned duties through relevant education, training, and experience.

The Study Sponsor assures that the key design elements of this protocol will be registered on www.clinicaltrials.gov as required by current regulations. In addition, results of this study will be made publicly available on www.clinicaltrials.gov regardless of outcome as required by current regulations as applicable.

### **16.2 Informed Consent Procedures**

Voluntary informed consent will be obtained from every subject (and/or legal representative, as applicable) prior to the initiation of any screening or other clinical study-related procedures. The Investigator must have a defined process for obtaining consent. Specifically, the Investigator, or designee, will explain the clinical study to each potential subject and the subject must indicate voluntary consent by signing and dating the approved informed consent form. The subject must be provided an opportunity to ask questions of the Investigator, and if required by local regulation, other qualified personnel. The Investigator must provide the subject with a copy of the consent form written in a language the subject understands. The consent document must meet all applicable local laws and will provide subjects with information regarding the purpose, procedures, requirements, and restrictions of the clinical study, along with any known risks and potential benefits associated with the investigational product, the available compensation, and the established provisions for maintaining confidentiality of personal, protected health information. Subjects will be told about the voluntary nature of participation in the clinical study and will be provided with contact information for the appropriate individuals should questions or concerns arise during the clinical study. The subject also will be told that their records may be accessed by appropriate authorities and Sponsor-designated personnel. The Investigator must keep the original, signed copy of the consent and must provide a duplicate copy to each subject.

### **16.3 Responsibilities of the Investigator and IRB**

Before clinical study initiation, this protocol, the informed consent form (and assent form, if applicable), any other written information provided to subject, and any advertisements planned for subject recruitment must be approved by an Institutional Review Board (IRB). Documentation for IRBs for this clinical study can be found in the Trial Master File. The Investigator must provide documentation of IRB approval to the Sponsor. The approval must be dated and must identify the applicable protocol, amendments (if any), informed consent form, assent form (if any), all applicable recruiting materials, written information for subjects, and subject compensation programs. The IRB must be provided with a copy of the Package Insert, any periodic safety updates, and all other information as required by local regulation and/or the IRB. At the end of the clinical study or in the case of early termination, the Investigator will notify the IRB on the progress of the clinical study at intervals stipulated by the IRB.

### 16.4 Sponsor and Monitoring Responsibilities

The Sponsor will designate a monitor to conduct the appropriate site visits at the appropriate intervals. The clinical investigation will be monitored to ensure that the rights and wellbeing of the subjects are protected; the reported data are accurate, complete and verifiable from the source documents, the equipment used to assess variables in the clinical investigation is maintained and calibrated per manufacturer instructions and Sponsor requirements; and the study is conducted in compliance with the current approved protocol (and amendment[s], if applicable), with current GCP, and with applicable regulatory requirements.

All investigative sites will have a site initiation. Monitoring will be conducted periodically while the clinical study is ongoing. Monitoring methods may include site visits, telephone, written, and fax correspondence. The assigned monitor will contact each site at appropriate intervals. The Lead Clinical Site Manager (LCSM) will determine the frequency of site visits. Close-out visits will take place after the last visit of the last subject.

Enrollment will be tracked and reported at regular intervals. Details regarding enrollment (eg, number of subjects pre-screened, screened, reasons for screen failures) may be requested of the investigative site and must be provided within a reasonable time period.

The Sponsor will be responsible for implementing and maintaining quality assurance and quality control systems to ensure the study is conducted and data are generated, documented and reported in compliance with the protocol, GCP and applicable regulatory requirements. The Sponsor will secure agreement from all involved parties to ensure direct access to all study related sites, source data and documents, and reports for the purpose of monitoring and

auditing by the Sponsor, and inspection by regulatory authorities. Quality control will be applied to each stage of data handling to ensure that all data are reliable and have been processed correctly.

### 16.5 Subject Confidentiality

The Investigator must ensure that the subject's anonymity is maintained throughout the course of the study. In particular, the Investigator must keep an enrollment log with confidential identifying information that corresponds to the subject numbers and initials of each study participant. At the end of the clinical study, the Study Sponsor will collect a copy of the enrollment log *without any identifying subject information*. All documents submitted to the Study Sponsor will identify the subjects exclusively by number and demographic information. No other personally identifying information will be transmitted to the Study Sponsor.

The Study Sponsor may release anonymized study data to external researchers for purposes of future research directly related to the study objectives, or future research that is beyond the scope of the current study objectives. The Informed Consent Form explains this to study subjects. Anonymization means that all identifiable information will be removed from the dataset and all links to the subjects in the study will be removed. Anonymization of the data will maintain confidentiality of the subjects who participate in the study so that they cannot be identified by external researchers. The anonymized data set will contain records from all of the subjects in the current study, but the anonymization process might change the data set in some ways, so external researchers will be informed that they might not be able to duplicate some of the results from this study.

### 16.6 Regulatory Documentation and Records Retention

The Investigator is accountable for the integrity, retention and security of all study-related data. The Investigator must maintain accurate, complete, and current records relating to the clinical study. The Investigator must maintain the required records during the clinical study and for a period of time specified by local law or per the Clinical Study Agreement, whichever is longer. If the Investigator retires, relocates, or for any other reason withdraws from responsibility of keeping the study records, the Sponsor must be notified and suitable arrangements made for retention of study records and source documents needed to comply with national and international regulations.

### 16.7 Clinical Study Results

The Investigator will notify the accredited IRB at the end of the study as required by the IRB. The end of the study is defined as database lock. In the case the study is ended prematurely, the Investigator will notify the accredited IRB, including the reasons for premature termination. 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 accredited IRB as required.

### 16.8 Publication of the Clinical Study

Any study information should not be discussed with persons outside of the clinical study. The protocol, study data, and information related to the study or to Alcon's products or research programs that is provided by Alcon (Confidential Information) is to be kept confidential, and not disclosed directly or indirectly to any third party other than those involved in the study who have a need to know.

All data and discoveries arising out of the study, patentable or non-patentable, shall be the sole property of Alcon. Alcon reserves the right of prior review of any publication or presentation of information related to the study. Alcon may use these data now and in the future for presentation or publication at Alcon's discretion or for submission to government regulatory agencies.

The existence of this clinical study is confidential and should not be discussed with persons outside of the study. You shall hold confidential, and not disclose directly or indirectly to any third party other than those persons involved in the study who have a need to know, the protocol, the data arising out of the study, and any other information related to the study or to Alcon's products or a research program that is provided by Alcon to you (the "Confidential Information"). All such persons must be instructed not to further disseminate this information to others. You shall not use the Confidential Information for any purpose other than the study.

The foregoing obligations of confidence and non-use assumed by you shall not apply to: (a)information which at the time of disclosure is in the public domain; (b) information which thereafter lawfully becomes part of the public domain other than through disclosure by or through you; (c) information which, as evidenced by your written records, was known by you prior to Alcon's disclosure; (d) information which is lawfully disclosed to you by a third party not under any obligation of confidence to Alcon; or (e) information which is required to be disclosed by law or government regulatory agency, provided reasonable advance notice of such disclosure is given to Alcon. In signing this protocol, you agree to the release of the data from this study and acknowledge the above confidentiality and publication policy. The provisions of this Statement shall survive completion of the study.

### **18 APPENDICES**

## Appendix A: Directions for Use for ACRYSOF IQ RESTOR +3.0 D Multifocal Toric IOL (Models SND1T3, SND1T4, SND1T5 or SND1T6)



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Table 1: Physical	Characteristics of Acr	vSof® IO Re	eSTOR®+3.0 D	Multifocal Toric IO
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Characteristics	Model						
	SND1T3	SND1T4	SND1T5	SND1T6			
Optic Type	Biconvex Apodized Diffractive Aspheric Toric						
Optics/Haptics Material	Ultraviolet a	nd blue light filtering	Acrylate/Methacryla	te Copolymer			
UV Cutoff at 10% T		401 nm for 21.0	ID (See Figure 2)				
Index Of Refraction		1	.55				
Optic Powers (spherical equivalent diopters)	+6.0 to +30.0 (0.5 D increments) (+3.0 Diopters of add power for near vision)						
IOL Cylinder Power (Diopters)	1.50	2.25	3.00	3.75			
Haptic Configuration	[	STABLEFO	RCE®Haptic				
Optics/Haptic Color		Ye	llow				
Optic Diameter (mm)		ŧ	5.0				
Overall Length (mm)		1	3.0				
Haptic Angle	l	3	0°				



NOTE S:

 The cutoff wavelength and the spectral transmittance curves presented here represent the range of transmittance values for the AcrySof® IQ ReSTOR® +3.0 D Multifocal Toric IOL.

- The mid-power Model SA60D3 IOL spectral transmittance curve is shown for comparison.
- The Model SA60D310L does not contain the blue light filtering chromophore.
- Measurements were direct transmittance using actual lenses in the Diopter powers indicated.
- Human lens data from Boettner and Wolter (1962).

Model	400 nm	425 nm	450 nm	475 nm
S A60D 3*	23	84	86	86
SND1T3-T6	8	33	48	68
Transmittance Difference (SA60D3-SND1T3-T6)	15	51	38	18
Transmittance Reduction with SND1 T3-T6 (% of SA60D3)	65	61	44	21

\*The Model SA60D3 IOL does not contain the blue light filtering chromophore.

#### MODE OF ACTION

AcrySof® IQ ReSTOR® +3.0 D Multifocal Toric IOL is intended to be positioned in the posterior chamber of the eye, replacing the natural crystalline lens. This position allows the lens to function as a refractive medium in the correction of aphakia. These biconvex optic IOLs have an aspheric apodized diffractive structure on the anterior surface. The biconvex aspheric optic reduces spherical aberration as compared to a standard spherical optic in an average eye. Additionally, these IOLs have a toric component on the posterior surface with axis marks to denote the flat meridian (plus cylinder axis). Alignment of the toric axis marks with the post-operative steep corneal meridian allows the lens to correct pre-existing corneal astigmatism. The astigmatic correction at the corneal plane for each AcrySof® IQ ReSTOR® +3.0 D Multifocal Toric IOL model is shown in Table 3.

#### Table 3: Cylinder Power and Corneal Astigmatism Correction Range

	Cylind	ler Power	Recommend Comeal Astigmatism Rang		
Lens Model	IOL Plane	Corneal Plane*	Lower	Upper	
SND1T3	1.50	1.03	0.75	1.28	
SND1T4	2.25	1.55	1.29	1.80	
SND1T5	3.00	2.06	1.81	2.32	
SND1T6	3.75	2.57	2.33	2.82	

\*Based on an average pseudophakic human eye

#### INDICATIONS

The AcrySof® IQ ReSTOR® +3.0 D Multifocal Toric Intraocular Lens (IOL) is intended for primary implantation in the capsular bag of the eye for the visual correction of aphakia and pre-existing corneal astigmatism secondary to removal of a cataractous lens in adult patients with and without presbyopia, who desire near, intermediate and distance vision, reduction of residual refractive cylinder and increased spectacle independence. The lens is intended to be placed in the capsular bag.

#### IOL IMPLANTATION

During implantation of the AcrySof® IQ ReSTOR® +3.0 D Multifocal Toric IOL, an Alcon qualified delivery system and viscoelastic combination should be used. The use of an unqualified combination may cause damage to the lens and potential complications during the implantation process. Alcon recommends using the qualified MONARCH IOL Delivery System or any other Alcon qualified combination. For a full list of Alcon qualified viscoelastics, handpieces, and cartridges for this lens, please contact your local Alcon representative.

#### WARNINGS

- Some visual effects may be expected due to the superposition of focused and unfocused multiple in ages. These may
  include glare, halo and starbursts, as well as other visual symptom s. As with other multifocal IOLs, there is a possibility
  that visual symptoms may be significant enough that the patient will request explant of the multifocal IOL.
- Areduction in contrast sensitivity as compared to a monofocal IOL may be experienced by some patients and may be more prevalent in lowlighting conditions. Therefore, multifocal patients should exercise caution when driving at night or in poor visibility conditions.
- The physician should consider the following points that are unique to the use of the AcrySof® IQ ReSTOR® +3.0 D Multifocal Toric IOLs:
  - The surgeon must target emmetropia to achieve optimal visual performance.
  - The surgeon should target the lowest possible residual astigmatism. Platients with significant postoperative astigmatism >1.0 D may not achieve optimal visual outcomes.
  - Care should be taken to achieve IOL centration, as lens decentration may result in a patient experiencing visual disturbances under certain lighting conditions.
  - Patients should be advised that unexpected outcomes could lead to continued spectacle dependence or the need for secondary surgical intervention (e.g., intraocular lens replacement or repositioning).
- 4. Rotation of the AcrySof® IQ. ReSTOR® +3.0 D. Multifocal Toric IOLs away from their intended axis can reduce the astigmatic correction. Misalignment greater than 30° may increase postoperative refractive cylinder. If necessary, lens repositioning should occur as early as possible prior to lens encapsulation. Some clinical cases suggest encapsulation is complete within four weeks of implantation.
- This lens should not be implanted if the posterior capsule is ruptured, if the zonules are damaged, or if a primary posterior capsulotom vis planned.
- Carefully remove all viscoelastic from both the anterior and posterior sides of the lens. Residual viscoelastic may cause complications including lens rotation resulting in misalignment of the AcrySof®TQ ReSTOR®+3.0 D Multifocal Toric IOL with the intended axis of placement.

#### PRE CAUTIONS

- Prior to surgery, prospective patients should be informed of the possible risks and benefits associated with the AcrySot® IQ ReSTOR® +3.0 D Multifocal Toric IOL. A Patient Information Brochure can be found in the label information section at <u>http://www.m.valcon.com</u>. Please provide a copy of the Patient Information Brochure to the patient.
- 2. As with other multifocal IOLs, patients may need glasses when reading small print or looking at small objects.
- Posterior capsule opacification (PCO) may significantly affect the vision of patients with multifocal IOLs sconer in its progression than patients with monofocal IOLs. This may be due to the reduced contrast sensitivity observed with multifocal IOLs.

4. The safety and effectiveness of the AcrySof®IQ ReSTOR®+3.0 D Multifocal Toric IOL have not been substantiated in patients with the pre-existing conditions and intra operative complications listed below. As with the implantation of any IOL, careful preoperative evaluation and sound clinical judgment should be used by the surgeon to decide the benefit/ risk ratio before implanting a lens in a patient. Alternative treatment should be considered for patients with one or more pre-existing conditions and intraoperative complications as described below.

Before Surgery

- Choroidal hemorrhage
- Concornitant severe eye disease
- Irregular come al astigmatism
- Significant irregular corneal aberration
- Retinal conditions or predisposition to retinal conditions, previous history of, or a predisposition to, retinal
  detachment or proliferative diabetic retinopathy, in which future treatment may be compromised by implanting
  this lens.
  - Multifocal IOLs may decrease the level of retinal detail on exam or during treatment slightly, and this could
    make laser and retinal surgeries and the diagnosis of some conditions more challenging (for example,
    early diabetic retinopathy when only 1 or 2 microaneurysms are present.)
- Subjects with diagnosed degenerative visual disorders (e.g., macular degeneration or other retinal disorders) that are predicted (by subjective assessment of the retina) to cause future acuity losses to a level worse than 0.2 logMAR
- Amblyopia
- Clinically severe corneal dystrophy (e.g., epithelial, stromal, or endothelial dystrophy), keratitis, keratoconjunctivitis, keratouveitis, keratopathy, or kerectasia
- Any inflammation or edema (swelling) of the cornea
- Rubella, congenital, traum atic or complicated cataracts
- Extremely shallow anterior chamber, not due to swollen cataract.
- Recurrent anterior or posterior segment inflammation of unknown etiology, or any disease producing an
  inflammatory reaction in the eye (e.g. iritis or uveitis).
- Aniridia
- Iris neova scularization
- Glaucoma (uncontrolled or controlled with medication)
- Microphthalmos
- Optic nerve atrophy
- Previous corneal transplant
- Pre-existing ocular conditions which may negatively impact stability of the implant.
- Color vision deficiencies
- Studies have shown that color vision discrimination is not adversely affected in individuals implanted with an AcrySof® Natural IOL and normal color vision. The effect of an AcrySof® Natural IOL in subjects with hereditary color vision defects and acquired color vision defects secondary to ocular disease (e.g. glaucoma, diabetic retinopathy, chronic uveitis, and other retinal or optical nerve diseases) has not been studied.
- Previous retinal detachment
- Diabetic retinopathy
- Previous refractive surgery
- Cervical dystonia or spasmodic torticollis may interfere with the pre-operative surgical plan or IOL axis
  orientation during surgery. Patients with IOL misalignment may not achieve the visual acuity of patients without
  such problems and may require IOL repositioning.
- Pregnancy

During Surgery

- Other planned ocular surgery procedures, including but not limited to, LASIK, astigmatic keratotomy, and limbal relaxing incisions
- Excessive iris mobility/Intraoperative Floppy Iris Syndrome
- Mechanical or surgical manipulation required to enlarge the pupil; pupil size must be at least 4.5 mm or larger just prior to IOL implantation;
- Vitreous loss (significant)
- Anterior cham ber bleeding (significant)
- Uncontrollable positive intraocular pressure
- Complications in which the IOL stability could be compromised, including, but not limited to:
  - zonular damage, separation, or rupture
  - Capsulotomy by any technique other than a circular tear
    - The presence of radial tears known or suspected at the time of surgery
    - Situations in which the integrity of the circular tear cannot be confirmed by direct visualization
  - Cataract extraction by techniques other than phacoemulsification or lique faction
     Situations where the need for a large capsulotom y can be anticipated (e.g., diabetics, retinal detachment in the fellow eye, peripheral retinal pathology, etc.)
  - capsular rupture or capsulorhexis tear
  - Bag-sulcus, sulcus-sulcus or unknown placement of the haptics

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- Patients with preoperative problems such as comeal endothelial disease, abnormal comea, macular degeneration, retinal degeneration, glaucoma, and chronic drug miosis may not achieve the visual acuity of patients without such problems. The physician must determine the benefits to be derived from lens implantation when such conditions exist.
   When binocular implantation of the AcrySof® IQ ReSTOR® +3.0 D Multifocal Toric IOL is planned, both eyes of a
- which bindcar inplantation of the Ad ysole refersion with a bindcar tone for is plantation has not been studied.
  A high level of surgical skill is required for intraocular lens inplantation. The surgeon should have observed and/or
- A high level of surgical skill is required for intraocular lens implantation. The surgeon should have observed and/or assisted in numerous implantations and successfully completed one or more courses on intraocular lens implantation before attempting to implant intraocular lenses.
- 8. As with any surgical procedure, there is risk involved. Plotential complications accompanying cataract or implant surgery may include, but are not limited to the following: comeal endothelial damage, infection (endophthalmitis), retinal detachment, vitritis, cystoid macular edema, comeal endothelial damage, cyclic mem brane, iris prolapse, hypopyon, transient or persistent glaucoma, and secondary surgical intervention. Secondary surgical interventions include, but are not limited to: lens repositioning, lens replacement, vitreous aspiration or iridectomy for pupillary block, wound leak repair, and retinal detachment repair.
- The clinical study of the AcrySof® IQ ReSTOR® +3.0 D Multifocal Toric IOL was conducted with the lens intended for implantation in the capsular bag only. There are no clinical data to demonstrate its safety and effectiveness for placement in the ciliary sulcus.
- 10. Anatomic and/or surgical factors may be related to the likelihood that a toric IOL could be placed incorrectly or rotate away from the intended position after placement. Some of these factors can be identified before or during the surgery, but others cannot. If a secondary surgical intervention is necessary to reposition the IOL, explantation should be considered as some subjects may have recurrent or persistent issues related to rotational instability and misalignment.
- 11. DONOT resterilize these intraocular lenses by any method.
- 12. DONOT store intraocular lenses at tem peratures over 45°C (113°F)
- 13. Use only sterile intraocular irrigating solutions (such as BSS® or BSS PLUS® solution) to rinse and/or soak lenses.
- Accurate keratometry and biometry in addition to the use of the AcrySof® IQ ReSTOR® +3.0 D Multifocal Toric IOL Calculator (<u>http://www.myalcon-toriccalc.com</u>) are recommended.
- 15. All preoperative surgical parameters are important when choosing a toriclens for implantation, including preoperative keratometric cylinder (magnitude and axis), incision location, surgeon's estimated surgically induced astigmatism (SIA) and biometry. Variability in any of the preoperative measurements can influence patient outcomes, and the effectiveness of treating eyes with lower amounts of preoperative comeal astigmatism.
- 16. In the clinical study all comeal incisions were placed temporally and a surgically induced astigmatism (SIA) input value of 0.0 diopters was used in the AcrySof® IQ ReSTOR® +3.0 D Multifocal Toric IOL Calculator (<u>http://www.nyalcon-toriccalc.com</u>). The SIA input value of 0.0 diopters was derived from an assumed 0.25 diopter with the-rule vector SIA from the temporal incision which was assumed to be compensated by an average 0.25 diopter against the-rule posterior comeal astigmatism in the clinical study. The marketed AcrySof® IQ ReSTOR® +3.0 D Multifocal Toric IOL Calculator allows the surgeon to customize the incision site and SIA based on the surgeon's dinical judgement. Clinical cutcomes using incision site or SIA input value different than used in the clinical study have not been evaluated.

#### CALCULATION OF LENS POWER

Accurate keratometry and biometry is essential for successful visual outcomes. Preoperative calculation of required spherical equivalent lens power for the AcrySof® IQ ReSTOR® +3.0 D Multifocal Toric IOL should be determined by the surgeon's experience and preference. The suggested A-constant listed on the outer label is presented as a starting point for implant power calculations. Lens constants must be "personalized" to compensate for the differences in instrumentation, measurement technique, and IOL power calculation methods that exist between different surgeons. To achieve optimal results with the AcrySof® IQ ReSTOR® +3.0 D Multifocal Toric IOL, it is important to use a personalized lens constant. The provisional A-constant listed on the outer label has been estimated from lens design data. An initial estimate can be obtained by referencing the personalized lens constant for similar lens model (e.g., AcrySof® IQ ReSTOR® IOL Model SN6AD1). IOL power calculation methods are often included with biometry equipment, and they are also described in the following references:

Hoffer, K.J. The Hoffer Q formula: A comparison of theoretic and regression formulas. J. Cataract Refract. Surg. 19:700-712, 1993.

Holladay, J.T. et al. Standardizing constants for ultrasonic biometry, keratometry, and IOL power calculations. J. Cataract Refract.

Surg. 23:1356-1370, 1997.

Olsen, T. Calculation of intraocular lens power: A review. Acta Ophthalmol Scand. 85: 472-285, 2007.

Retzlaff, J.A., Sanders, D.R., and Kraff, M. Lens Implant Power Calculation, 3rd ed. Slack, Inc., Thorofare, N.J., 1990.

AcrySof®IQ ReSTOR® +3.0 D Multifocal Toric IOLs are labeled with the IOL spherical equivalent power. In order to optimize IOL selection and axis placement, Alcon provides an AcrySof®IQ ReSTOR® +3.0 D Multifocal Toric IOL calculator for the surgeon. Use of the AcrySof®IQ ReSTOR® +3.0 D Multifocal Toric IOL calculator for the surgeon. Use of the AcrySof®IQ ReSTOR® +3.0 D Multifocal Toric IOL. The astigm atism recommended to select the cylinder power of the AcrySof®IQ ReSTOR® +3.0 D Multifocal Toric IOL. The astigm atism to be corrected should be determined from keratometry and biometry data rather than refractive data since the presence of lenticular astigmatism in the crystalline lens to be removed may influence results. The size and location of the surgical incision may affect the amount and axis of corneal astigmatism . Pre-operative keratometry and biometry data, incision location (temporal was used in this clinical study), and the surgeon's estimated surgically induced corneal astigmatism are used to determine the appropriate AcrySof®IQ ReSTOR® +3.0 D Multifocal Toric IOL model, spherical equivalent lens power, and axis of placement in the eye.

#### DIRECTIONS FOR USE

- Examine the label on the unopened package for model, powers (base, cylinder, and add), proper configuration, and expiration date.
- After opening the cardboard storage container, verify lens case information (e.g., model, power, and serial number) is consistent with information on outer package labeling.
- This device is sterile until the inner pouch is opened. Inspect the pouch carefully for tears, cuts, punctures or other signs that the pouch has been opened or damaged. DO NOT implant the IOL if the sterility has been compromised (see RETURNED GOODS POLICY).
- To remove the lens, open the undamaged pouch and transfer the case to a sterile environment. Carefully open the case to expose the lens.
- To minimize the occurrence of marks on the lens due to handling, all instrumentation should be scrupulously clean. Any forceps used for lens handling must have round edges and smooth surfaces.
- 6. When removing the lens from the case, DO NOT grasp the optical area with forceps. The IOL should only be handled by the haptics. Handle lenses carefully to avoid damage to lens surfaces or haptics. DO NOT attempt to reshape haptics in any way.
- Rinse the lens thoroughly using sterile intraocular irrigating solution such as BSS® or BSS PLUS® solution. Prior to
  insertion the lens should be carefully examined to ensure that particles have not adhered during handling.
- Alcon recommends that the AcrySof® IQ ReSTOR® +3.0 D Multifocal Toric IOLs be used with an Alcon approved delivery system.
- 9. There are various surgical procedures that can be used, and the surgeon should select a procedure that is appropriate for the patient. Current techniques, appropriate instrumentation, and a list of their equivalents for delivery and implantation are available from Alcon. Surgeons should verify that appropriate instrumentation is available prior to surgery.
- 10. DO NOT reuse this IOL. This device is for single use only.

#### PLACEMENT OF THE ACRYSOF® IQ RESTOR® +3.0 D MULTIFOCAL TORIC IOL

For optimal results, the surgeon must ensure the correct placement and orientation of the lens within the capsular bag. The posterior surface of the IOL is marked with indentations (three at each end) at the haptic/optic junction that identify the flat meridian of the AcrySof® IQ ReSTOR® +3.0 D. Multifocal Toric IOL optic. These indentations form an imaginary line representing the plus cylinder axis (note: IOL cylinder steep meridian is 90° away). The AcrySof® IQ ReSTOR® +3.0 D. Multifocal Toric IOL cylinder axis marks should be aligned with the post-incision steep corneal meridian (intended axis of placement) or as determined by the AcrySof® IQ ReSTOR® +3.0 D. Multifocal Toric IOL calculator.

Prior to surgery mark the operative eye with at least two reference points. Alcon recommends one of the following methods for marking the eye: 1) with the patient sitting upright, clearly and precisely mark the two reference positions with a surgical skin marker or a marking pencil, or 2) with the subject sitting upright, use an axis marker to clearly and precisely mark the intended axis of the IOL placement identified by the web-based AcrySof® IQ ReSTOR® +3.0 D Multifocal Toric IOL calculator. Using these marks as reference points, an axis marker can be used immediately prior to or during surgery to mark the axis of lens placement following the use of the AcrySof® IQ ReSTOR® +3.0 D Multifocal Toric IOL calculator to determine the optimal axis of placement.

After the lens is inserted, precisely align the axis marking indentations on the AcrySof®IQ ReSTOR®+3.0 D Multifocal Toric IOL with the marked axis of lens placement. Carefully remove all viscoelastic (Viscoat OVD was used in this clinical study) from both the anterior and posterior sides of the lens. This may be accomplished by manipulating the IOL optic with the I/A tip and using standard irrigation/aspiration techniques to remove all viscoelastic from the eye. Bimanual techniques may be used, if preferred, to ensure removal of viscoelastic from behind the lens implant. Special care should be taken to ensure proper positioning of the AcrySof®IQ ReSTOR® +3.0 D Multifocal Toric IOL at the intended axis following viscoelastic removal. Residual viscoelastic may allow the lens to rotate causing misalignment of the AcrySof®IQ ReSTOR® +3.0 D Multifocal Toric IOL with the intended axis of placement.

Misalignment of the axis of the lens with the intended axis of placement may compromise its astigmatic correction. Such misalignment can result from inaccurate keratometry or marking of the cornea, inaccurate placement of the AcrySof® IQ ReSTOR® +3.0 D Multifocal Toric IOL axis during surgery, an unanticipated surgically induced change in the cornea, or physical rotation of the AcrySof® IQ ReSTOR® +3.0 D Multifocal Toric IOL axis during surgery, an unanticipated surgically induced change in the cornea, or physical rotation of the AcrySof® IQ ReSTOR® +3.0 D Multifocal Toric IOL after implantation. In order to minimize this effect, the surgeon should be careful to ensure that preoperative keratometry and biometry is accurate and that the IOL is properly oriented prior to the end of surgery.

#### PATIENT REGISTRATION AND REPORTING

The Platient Identification Card included in the package is to be completed and given to the patient, together with instructions to keep the card as a permanent record to be shown to any eye care praditioner the patient consults in the future.

In the United States, each patient should be registered with Alcon Laboratories, Inc. Immediately following implantation of one of these lenses. Registration is accomplished by completing the Implant Registration Card that is endosed in the lens box and mailing it to Alcon Laboratories, Inc. Patient registration is essential for Alcon Laboratories, Inc. long-term patient follow-up program and will assist us in responding to adverse event reports.

Events that reasonably suggest that the lens may have caused or contributed to death or serious injury, including events occurring as a result of failure of a medical device to meet its performance specifications or otherwise perform as intended should be reported to Alcon Laboratories, Inc. This information is being requested from all surgeons in order to document potential long-term effects of intraocular lens implantation. Surgeons in the United States should use the following address and telephone number for reporting adverse events involving these intraocular lenses:

Alcon Laboratories, Inc., Medical Safety 6201 South Freeway, Fort Worth, Texas 76134-2099 Tel.: (800) 757-9780

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Outside the United States, contact local Alcon offices or distributors regarding any reports of adverse events.

#### CLINICAL STUDIES

The data from a recent clinical study of the AcrySof® IQ ReSTOR®+3.0 D Multifocal Toric IOL Models SND1T3, SND1T4, SND1T5, and SND1T6, and data from two relevant prior studies are included in this section:

- 1. A clinical study was conducted to assess the safety and effectiveness of the AcrySof®IQ ReSTOR® +3.0 D Multifocal Toric IOL Models SND1T3, SND1T4, SND1T5, and SND1T6.
- 2. A prior clinical study, including a night driving simulator sub-study, was conducted to demonstrate the safety and effectiveness of the non-blue-light-filtering multi-piece and single-piece AcrySof® ReSTOR® Models MA60D3 and SA60D3. The AcrySof® IQ ReSTOR® +3.0 D Multifocal ToricIOL Models SND1T3, SND1T4, SND1T5, and SND1T6 use an apodized diffractive optic as in Models MA60D3 and SA60D3. The safety data (adverse events and night driving simulation results) provide an expanded description of the safety profile of AcrySof® IQ ReSTOR® +3.0 D Multifocal Toric IOL Models SND1T6.
- 3. A prior clinical study, including assessment of color perception, was conducted to demonstrate the safety and effectiveness of the AcrySof® Natural single-piece monofocal IOL Model SB30AL. AcrySof® IQ ReSTOR® +3.0 D Multifocal Toric IOL Models SND1T3, SND1T4, SND1T5, and SND1T6 are also single-piece IOLs using the same material mechanical platform and the same blue light filtering chromophore did not have an effect on color perception in subjects with normal color vision prior to surgery. These results provide an expanded description of the safety profile expected of the AcrySof® IQ ReSTOR® +3.0 D Multifocal Toric IOL Models SND1T3, SND1T4, SND1T5, and SND1T6.

Summaries of these clinical studies are provided below. Please use caution when comparing these results with results from similar device studies due to potential differences in subject cohorts, test methods, etc.

#### 1. AcrySof® IQ ReSTOR® +3.0 D MULTIFOCAL TORIC INTRAOCULAR LENSES (IOLS)

#### Summary of Clinical Study

The clinical study was a prospective, nonrandomized, unmasked, parallel-group study was designed for bilateral implantation of a minimum of 510 (maxim um of 600 subjects) subjects in total, with a minimum of 340 subjects implanted with the investigational AcrySof® IQ ReSTOR® +3.0 D Multifocal Tori IOL Models SND1T3-SND1T6 (referred to as the ReSTOR® Toric +3.0 D IOL below), and a minimum of 170 subjects implanted with the FDA approved AcrySof® ReSTOR® (+4.0 D Add) Multifocal IOL Model SA6D3 (referred to as the ReSTOR®+4.0 D IOL below), at up to 25 investigational sites in the United States. Assuming a 10% drop-out rate for a 12 month follow-up in the all implanted data set, approximately 459 subjects were intended to be evaluated at the 12 month visit, approximately 306 investigational lens subjects and 153 control I ensures to the evaluated at the 12 month visit, approximately 306 investigational lens subjects and 153 control I ensures to the evaluated at the 12 month visit, approximately 306 investigational lens subjects and 153 control I ensures to the evaluated at the 12 month visit, approximately 306 investigational lens subjects and 153 control I ensubjects. The investigational ReSTOR® Toric +3.0 D IOL was designed with a near reading distance of 30 cm. The parameters impacted by the near add power difference were intermediate visual acuity and binocular defocus, in favor of the ReSTOR® Toric +3.0 D IOL. No difference was observed in the rate of severe visual disturbances/distortions between the ReSTOR® Toric +3.0 D IOL and the RESTOR® +4.0 D IOL, although this would be expected to favor the RESTOR® Toric +3.0 D IOL based on the add power difference.

Inclusion of the ReSTOR® +4.0 D IOL as an active control in the clinical study was necessary to evaluate the safety and the effectiveness of the investigational lens as a newtoric multifocal IOL with similar attributes to this established multifocal lens. The trial objective was to demonstrate that the efficacy and safety profile, demonstrated with the control ReSTOR® +4.0 D IOL in non-astigmatic subjects was reasonably retained with the investigational ReSTOR® Toric +3.0 D IOL in subjects with corneal astigmatism.

All of the subjects in the ReSTOR® +4.0 D IOL group were required to have  $\leq 0.74$  D of preoperative keratometric astigmatism in both eyes as measured only by the IOLMaster. Subjects with preoperative astigmatism of  $\geq 0.75$  D, as measured only by the IOLMaster, in both operative eyes and with 0.75 D to 2.82 D of predicted cross cylinder in both operative eyes, based on the study specific web-based AcrySof® IQ ReSTOR® +3.0 D Multifocal Toric IOL Clinical Calculator, were required to be implanted with one of the ReSTOR® Toric +3.0 D IOL Models SND1T3-SND1T6. All corneal incisions were placed temporally and a surgically induced astigmatism (SIA) input value of 0.0 diopters was used in the study specific web-based AcrySof® IQ ReSTOR® +0.0 diopters was used in the study specific web based AcrySof® IQ ReSTOR® +0.0 diopters was used in the study specific web based AcrySof® IQ ReSTOR® +0.0 diopters was used in the study specific web based AcrySof® IQ ReSTOR® +0.0 diopters was used in the study specific web based AcrySof® IQ ReSTOR® +0.0 diopters was used in the study specific web based AcrySof® IQ ReSTOR® +0.0 diopters was used in the study specific web based AcrySof® IQ ReSTOR® +0.0 diopters was used in the study specific web based AcrySof® IQ ReSTOR® +0.0 diopters was used in the study specific web based AcrySof® IQ ReSTOR® +0.0 diopters was used in the study specific web based AcrySof® IQ ReSTOR® +0.0 diopters was used in the study specific web based AcrySof® IQ ReSTOR® +0.0 diopters was used in the study specific web based AcrySof® IQ ReSTOR® +0.0 diopters was used in the study specific web based AcrySof® IQ ReSTOR® +0.0 diopters was used in the study specific web based AcrySof® IQ ReSTOR® +0.0 diopters was used in the study specific web based AcrySof® IQ ReSTOR® +0.0 diopters was used IC AcrySof® IQ ReSTOR® +0.0 diopters was used IC AcrySof® IQ ReSTOR® +0.0 diopters was used IC AcrySof® IQ ReSTOR® +0.0 diopters Web AcrySof® AcrySof® IQ ReSTOR® +0.0 diopters Web AcrySof® AcrySof® +0.0 diopters Web AcrySof® +0.0 d

In the investigational ReSTOR® Toric +3.0 D IOL group, a minimum of 240 subjects needed to be implanted with Model SND1T3 or SND1T4 in the first operative eye (≤ 2.0 D astigmatism) and a minimum of 100 subjects needed to be implanted with Model SND1T5 or SND1T6 in the first operative eye (> 2.0 D astigmatism).

All eyes with successful IOL implantation in at least one eye were considered evaluable for the All Implanted analyses. All eyes successfully implanted that had at least one postoperative visit and had no properative ocular pathology or macular degeneration at any time were evaluable for Best Case analyses. The Best Case data set was the primary data set of analysis for the contrast sensitivity and binocular defocus. All eyes with attempted IOL implantation (successful or aborted after contact with the eye) were considered evaluable for the safety analyses.

For subjects with IOL replacement due to visual disturbance, performance testing (including UCDVA, BCDVA, manifest refraction, slit-lamp examination, dilated fundus examination and subject responses to the patient reported outcome questionnaires) results collected prior to the secondary surgical intervention were carried forward to the final analysis.

#### **Clinical Study Results**

#### Subject Population

A total of 574 subjects were bilaterally in planted in this dinical study with 386 subjects receiving the ReSTOR® Toric +3.0 D IOL and 188 subjects receiving the control ReSTOR®+4.0 D IOL.

The study consisted of 65.5% females and 34.5% males. Stratifying by race, there were 93.7% White, 4.5% Black or African American, 0.9% Asian and 0.9% designated "Other". Ethnicity of the study population designated 1.6% as Hispanic. A Best Case cohort (no clinically significant preoperative ocular pathology or postoperative macular degeneration) consisted of 365 ReSTOR® Toric +3.0 D IOL subjects and 175 ReSTOR® +4.0 D IOL control subjects. The mean age for the study population was 67 ± 9 years. The length of subject follow-up was 12 months.

#### Monocular Visual Acuity

ReSTOR® Toric +3.0 D IOL met the clinical performance target (non-inferiority margin of 0.10 logMAR) for Uncorrected Distance Visual Acuity. There were no clinically relevant differences in the mean Best Corrected Distance Visual Acuity for subjects implanted with either the ReSTOR® Toric +3.0 D IOL compared with subjects implanted with the control ReSTOR® +4.0 D IOL.

The following is a summary of monocular visual acuity (VA) results for subjects who completed the Form 5 (1 year after second eye implantation) visit. The data are presented in Tables 4-5 below.

#### Table 4: Comparison of Monocular Uncorrected Distance Visual Acuity Using Least Square Estimates A

п	Impi	lant	ted,	1	Year	Pos	tope	rative
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		ReSTOR® Toric +3.0 D (N=386)	ReSTOR® +4.0 D (N=186)	Difference (95%UCL)
	N	373	180	
First Implanted Eye	Mean	0.126	0.125	0.001 (0.030)
	SE	0.013	0.015	
	N	371	180	
Second Implanted Eye	Mean	0.113	0.102	0.011 (0.038)
	SE	0.011	0.013	

ReSTOR®Toric+3.0 DIOL = AcrySof®IQ ReSTOR®+3.0 D Multifocal Lens Models SND1T3/SND1T4/SND1T5/SND1T6 ReSTOR®+4.0 D IOL = AcrySof® ReSTOR® Multifocal Lens (+4.0 D Add) Model SA60D3

Difference = ReSTOR® Toric +3.0 D IOL - ReSTOR® +4.0 D IOL

Estimates were based on the repeated measure analysis of covariance

UCL = 95% Upper confidence limit; SE = Standard error

"(N= )" in column header is number in the treatment group. Subjects who discontinued before Visit 5 are excluded from this analysis. Num bers with data are indicated in the table body.

ReSTOR® Toric +3.0 D IOL met the clinical performance target (non-inferiority margin of 0.10 logMAR) for Uncorrected Near Visual Acuity at fixed distance. No clinically relevant differences in Distance Corrected Near Visual Acuity at fixed distance for the ReSTOR® Toric +3.0 D IOL and the control ReSTOR® +4.0 D IOL were observed.

#### Table 5: Comparison of Monocular Uncorrected Near Visual Acuity At Fixed Distance Using Least Square Estimates All Implanted, 1 Year Postoperative

		ReSTOR® Toric +3.0 D (N=386)	ReSTOR® +4.0 D (N=186)	Difference (95%UCL)
	N	373	180	
First Implanted Eye	Mean	0.193	0.236	-0.044 (-0.017)
87	SE	0.015	0.017	
	N	371	180	
Second Implanted Eye	Mean	0.181	0.234	-0.052 (-0.026)
	SE	0.013	0.015	C*

ReSTOR®Toric +3.0 D IOL = AcrySof® IQ ReSTOR® +3.0 D Multifocal Lens Models SND1T3/SND1T4/SND1T5/SND1T6 ReSTOR® +4.0 D IOL = AcrySof® ReSTOR® Multifocal Lens (+4.0 D Add) Model SA60D3

Difference = ReSTOR® Toric +3.0 D IOL - ReSTOR® +4.0 D IOL

Estimates were based on the repeated measure analysis of covariance

UCL = 95% Upper confidence limit; SE = Standard error

"(N= )" in column header is number in the treatment group. Subjects who discontinued before Visit 5 are excluded from this analysis. Numbers with data are indicated in the table body.

No clinically relevant differences in Uncorrected Near Visual Acuity at best distance were observed for either the ReSTOR® Toric +3.0 D IOL or the control ReSTOR® +4.0 D IOL. Additionally, there were no clinically relevant differences in Distance Corrected Near Visual Acuity at best distance observed for the ReSTOR® Toric +3.0 D IOL or the control ReSTOR® +4.0 D IOLs under photopic or mesopic conditions.

The Best Corrected Near Visual Acuity (BCNVA) for subjects implanted with the ReSTOR® Toric +3.0 D IOL compared favorably to the BCNVA for subjects implanted with the or the control ReSTOR® +4.0 D IOL.

#### **Binocular Visual Acuity**

There were no clinically relevant differences in mean Best Corrected Distance Visual Acuity (BCDVA) for subjects implanted with the ReSTOR®Toric +3.0D IOL compared with subjects implanted with the control ReSTOR® +4.0D IOL. The observed percentage of subjects achieving a 2 or greater line improvement in BCDVA was similar among the two lens models (ReSTOR® Toric +3.0D and the control ReSTOR®+4.0D IOL).

The following is a summary of binocular visual acuity (VA) results for subjects who completed the Form 5 (1 year after second eye implantation) visit. The data are presented in Tables 6-10 below.

#### Table 6: Overall Comparison of ReSTOR® Toric +3.0 D and ReSTOR® +4.0 D IOLs Mean Binocular Distance-Corrected Visual Acuity (logMAR), All Implanted, 1 Year Postoperative

Model	Model Near VA@ I Best Distance		Intermediate VA @ 60 cm	Intermediate VA @ 70 cm	Distance VA	
ReSTOR®+3.0 D Toric	0.08 (20/25)	0.08 (20/25)	0.14 (20/25)	0.20 (20/32)	-0.04 (20/20)	
ReSTOR® +4.0 D	0.09 (20/25)	0.28 (20/40)	0.35 (20/50)	0.36 (20/50)	-0.04 (20/20)	

ReSTOR® Toric + 3.0 D = AcrySof® I Q ReSTOR® + 3.0 D Multifocal Toric IOL Models SND1T3/SND1T4/SND1T5/SND1T6 ReSTOR® + 4.0 D = AcrySof® ReSTOR® Multifocal IOL (+ 4.0 D Add) Model SA60D3

			20/20 (J1) or better	20/25 (J2) or better	20/32 (J4) or better	20/40 (J5) or better	20/50 (J6) or better	20/63 (J8) or better	Worse than 20/63 (J8)
		N	%	%	%	%	%	%	%
Uncorrected	ReSTOR® Toric +3.0 D	371	35.6	69.5	89.5	97.8	98.7	99.5	0.5
(Best Distance*)	ReSTOR® +4.0 D	180	25.6	67.8	88.9	96.1	98.3	99.4	0.6
Uncorrected	ReSTOR® Toric +3.0 D	371	42.3	70.9	89.5	96.2	98.1	99.7	0.3
(standard Distance**)	ReSTOR® +4.0 D	180	23.9	56.1	84.4	92.2	97.8	98.9	1.1
Distance	ReSTOR® Toric +3.0 D	371	37.5	73.9	94.6	97.8	99.2	99.5	0.5
(Best Distance*)	ReSTOR® +4.0 D	180	35.0	72.2	93.9	95.6	99.4	100.0	0.0
Distance Corrected	ReSTOR® Toric +3.0 D	371	44.5	80.6	94.1	98.1	98.9	99.5	0.5
(Standard Distance**)	ReSTOR® +4.0 D	180	31.1	65.6	88.9	97.2	98.3	98.9	1.1
Best Corrected	ReSTOR® Toric +3.0 D	371	58.2	86.0	97.3	99.2	99.5	100.0	0.0
(Standard Distance**)	ReSTOR® +4.0 D	180	41.7	81.1	92.8	98.3	99.4	100.0	0.0

#### Table 7: Cumulative Binocular Photopic Near Visual Acuity of ReSTOR® Toric +3.0 D and ReSTOR® +4.0 D IOLs by Lens Model, All Implanted, 1 Year Postoperative

ReSTOR® Toric +3.0 D = AcrySof® IQ ReSTOR® +3.0 D Multifocal Toric IOL Models SND1T3/SND1T4/SND1T5/ SND1T6

ReSTOR® +4.0 D = AcrySof® ReSTOR® Multifocal IOL (+4.0 D Add) Model SA60D 3

\*Best distance: The distance selected by the subject as the distance of best near vision \*\*Standard distance: 33 cm for the ReSTOR®+4.0 D IOL and 40 cm for ReSTOR®+3.0 D Toric IOL

Table 8: Cumulative Binocular Photopic Distance Visual Acuity of ReSTOR® Toric +3.0 D and ReSTOR® +4.0 D IOLs by Lens Model, All Implanted, 1 Year Postoperative

			20/20 or better	20/25 or better	20/32 or better	20/40 or better	20/50 or better	20/63 or better	Worse than 20/63
	0:	N	%	%	%	%	%	%	%
Uncorrected	ReSTOR® Toric +3.0 D	371	65.0	88.7	96.0	98.9	99.2	99.5	0.5
	ReSTOR® +4.0 D	180	68.9	91.7	97.8	99.4	99.4	100.0	0.0
Best Corrected	ReSTOR® Toric +3.0 D	371	90.3	97.3	99.2	99.7	100.0	100.0	0.0
	ReSTOR® +4.0 D	180	96.1	97.8	99.4	99.4	100.0	100.0	0.0

ReSTOR @ Toric + 3.0 D = AcrySof@ IQ ReSTOR # + 3.0 D Multifocal Toric IOL Models SND1T3/SND1T4/SND1T5/ SND1T6

ReSTOR @ +4.0 D = AcrySot@ ReSTOR @ Multifocal IOL (+4.0 D Add) Model SA60D3

Clinically relevant differences favoring the ReSTOR® Toric +3.0 D IOL were observed for mean Uncorrected Intermediate Visual Acuity and for Distance Corrected Intermediate Visual Acuity at all testing distances (50 cm, 60 cm, and 70 cm).

#### Table 9: Intermediate Photopic Visual Acuity for ReSTOR® +3.0 D Toric and ReSTOR® +4.0 D IOLs by Lens Model, All Implanted, 1 Year Postoperative

	Ĩ	N	Percent 20/40 or better				
	35		50 cm	60 cm	70 cm		
lineerrooted	ReSTOR® Toric +3.0 D	371	93.3	86.3	79.8		
oncorrected	ReSTOR® +4.0 D	180	63.3	47.2	50.6		
Distance Compated	ReSTOR® Toric +3.0 D	371	96.5	88.4	79.0		
Distance Corrected	ReSTOR® +4.0 D	180	66.7	37.8	38.9		

ReSTOR® Toric +3.0 D = AcrySof® IQ ReSTOR® +3.0 D Multifocal Toric IOL Models SND1T3/SND1T4/SND1T5/SND1T6 ReSTOR® +4.0 D = AcrySof® ReSTOR® Multifocal IOL (+4.0 D Add) Model SA60D3

#### Table 10: Mean LogMAR Binocular Distance Corrected Intermediate Visual Acuity, for ReSTOR® Toric +3.0 D and ReSTOR® +4.0 D IOLs, All Implanted, 1 Year Postoperative

Intermediate VA	ReSTOR® Toric +3.0 D	ReSTOR® +4.0 D
50 cm	0.08	0.28
60 cm	0.14	0.35
70 cm	0.20	0.36

ReSTOR® Toric +3.0 D = AcrySof® IQ ReSTOR® +3.0 D Multifocal Toric IOL Models SND1T3/SND1T4/SND1T5/SND1T6 ReSTOR® +4.0 D = AcrySof® ReSTOR® Multifocal IOL (+4.0 D Add) Model SA60D3

#### **Binocular Defocus Curves**

The mean binocular defocus curves obtained at 6 months for the ReSTOR® Toric +30 D IOL and the ReSTOR® +4.0 D IOL display two peaks that demonstrate their multifocal performance, one at the zero baseline position, which corresponds to optical infinity, and one near, at -2.5 D for the ReSTOR® Toric +3.0 D IOL corresponding to the 40 cm near focal point, and at -3.0 D for the ReSTOR® +4.0 D IOL corresponding to the 33 cm near focal point of the lens (Figure 3). The ReSTOR® Toric +3.0 DIOL provided meanrange of 20.40 or better vision (depth of focus) from approximately -3.75 D to 0.00 D, corresponding to a range of distances from approximately 26 cm to infinity.





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#### Contrast Sensitivity

Binocular best corrected distance contrast sensitivity was performed using a sine wave grating acuity chart (VectorVision CSV1000E) at the 4-6 month exam under four conditions: photopic without glare, photopic with glare, mesopic without glare, and mesopic with glare.

Descriptive statistics including mean contrast scores and standard deviations (SD) are provided for the ReSTOR® Toric +3.0 D IOL and for the ReSTOR® +4.0 D IOL groups under each photopic lighting condition and spatial frequency (Table 11) and each mesopic lighting condition and spatial frequency (Table 12). The number and percent of subjects unable to see at least one grating are shown in the table in the "Number Scoring (-1)" rows. As per ISO 11979-9:2006, these analyses were performed using data from the best case data set (defined as all eyes successfully in planted that had at least 1 postoperative visit and had no preoperative ocular pathology or macular degeneration at any time).

		Photopic w	ithout glare	Photopic with glare		
		ReSTOR® Toric +3.0 D	ReSTOR® +4.0 D	ReSTOR® Toric +3.0 D	ReSTOR® +4.0 D	
3.0 CPD	n	360	173	360	173	
	Number scoring (-1)	0 (0.0%)	0 (0.0%)	2 (0.6%)	1 (0.6%)	
	Mean (SD)	1.68 (0.22)	1.71 (0.23)	1.59 (0.27)	1.62 (0.28)	
	(Min, Max)	(1.18, 2.08)	(0.70, 2.08)	(0.40, 2.08)	(0.40, 2.08)	
-	95% CI	(1.65, 1.70)	(1.67, 1.74)	(1.56, 1.61)	(1.58, 1.66)	
6.0 CPD	n	360	173	360	173	
	Number scoring (-1)	1 (0.3%)	0 (0.0%)	24 (6.7%)	6 (3.5%)	
	Mean (SD)	1.78 (0.24)	1.81 (0.23)	1.61 (0.39)	1.66 (0.36)	
	(Min, Max)	(0.61, 2.29)	(0.90, 2.29)	(0.61, 2.29)	(0.61, 2.29)	
	95% CI	(1.76, 1.81)	(1.78, 1.85)	(1.57, 1.65)	(1.61, 1.71)	
12.0 CPD	n	360	173	360	173	
	Number scoring (-1)	5 (1.4%)	3 (1.7%)	18 (5.0%)	7 (4.0%)	
	Mean (SD)	1.38 (0.35)	1.37 (0.32)	1.25 (0.41)	1.24 (0.38)	
	(Min, Max)	(0.31, 2.00)	(0.31, 2.00)	(0.31, 2.00)	(0.31, 2.00)	
	95% CI	(1.34, 1.42)	(1.32, 1.42)	(1.21, 1.29)	(1.18, 1.30)	
18.0 CPD	n	360	173	360	173	
	Number scoring (-1)	4 (1.1%)	1 (0.6%)	8 (2.2%)	2 (1.2%)	
	Mean (SD)	0.87 (0.31)	0.88 (0.30)	0.84 (0.33)	0.81 (0.32)	
	(Min, Max)	(-0.13, 1.56)	(-0.13, 1.56)	(-0.13, 1.56)	(-0.13, 1.56)	
	95% CI	(0.84, 0.90)	(0.83, 0.92)	(0.80, 0.87)	(0.77, 0.86)	

#### Table 11: Descriptive Statistics for Binocular Photopic Contrast Sensitivity at 6 Months Postoperative (Best Case Population)

ReSTOR® Toric +3.0 D = AcrySof® IQ ReSTOR®+3.0 D Multifocal ToricIOL Models SND1T3/SND1T4/ SND1T5/SND1T6 ReSTOR®+4.0 D = AcrySof® ReSTOR® Multifocal IOL (+4.0 D Add) Model SA60D3

		Mesopic w	ithout glare	Mesopic with glare		
		ReSTOR® Toric +3.0 D	ReSTOR® +4.0 D	ReSTOR® Toric +3.0 D	ReSTOR® +4.0 D	
1.5 CPD	n	359	172	359	172	
	Number scoring (-1)	5 (1.4%)	2 (1.2%)	7 (1.9%)	3 (1.7%)	
	Mean (SD)	1.57 (0.26)	1.55 (0.25)	1.51 (0.29)	1.50 (0.28)	
	(Min, Max)	(0.30, 1.97)	(0.30, 1.97)	(0.30, 1.97)	(0.30, 1.97)	
	95% CI	(1.54, 1.59)	(1.51, 1.59)	(1.48, 1.54)	(1.46, 1.55)	
3.0 CPD	n	360	172	360	172	
	Number scoring (-1)	0 (0.0%)	0 (0.0%)	3 (0.8%)	0 (0.0%)	
	Mean (SD)	1.57 (0.25)	1.57 (0.24)	1.55 (0.28)	1.55 (0.26)	
	(Min, Max)	(0.70, 2.08)	(0.85, 2.00)	(0.40, 2.08)	(0.70, 2.08)	
	95% CI	(1.54, 1.59)	(1.53, 1.61)	(1.52, 1.58)	(1.52, 1.59)	
6.0 CPD	n	360	172	360	172	
	Number scoring (-1)	9 (2.5%)	5 (2.9%)	41 (11.4%)	19 (11.0%)	
	Mean (SD)	1.51 (0.31)	1.50 (0.31)	1.41 (0.37)	1.40 (0.37)	
	(Min, Max)	(0.61, 2.29)	(0.61, 2.29)	(0.61, 2.29)	(0.61, 2.21)	
	95% CI	(1.47, 1.54)	(1.46, 1.55)	(1.37, 1.45)	(1.35, 1.46)	
12.0 CPD	n	360	172	360	172	
	Number scoring (-1)	52 (14.4%)	31 (18.0%)	94 (26.1%)	50 (29.1%)	
	Mean (SD)	0.92 (0.39)	0.89 (0.40)	0.81 (0.40)	0.80 (0.41)	
	(Min, Max)	(0.31, 2.00)	(0.31, 2.00)	(0.31, 2.00)	(0.31, 2.00)	
	95% CI	(0.88, 0.96)	(0.83, 0.95)	(0.76, 0.85)	(0.74, 0.87)	

#### Table 12: Descriptive Statistics for Binocular Mesopic Contrast Sensitivity at 6 Months Postoperative (Best Case Population)

ReSTOR®Toric +3.0 D = AcrySof® IQ ReSTOR®+3.0 D Multifocal Toric IOL Models SND1T3/SND1T4/ SND1T5/SND1T6 ReSTOR®+4.0 D = AcrySof® ReSTOR®Multifocal IOL (+4.0 D Add) Model SA60D3

#### **Orientation of Lens Axis**

Lens axis misalignment, the orientation of the lens axis at the operative visit compared to the intended lens axis orientation (calculated using preoperative biometry measurements and the study specific web-based Alcon AcrySof® IQ ReSTOR® +3.0 D Multifocal Toric IOL Clinical Calculator) was assessed and accuracy of lens placement was demonstrated with the mean absolute difference between intended axis orientation and achieved axis orientation at surgery being 5.0° (S.D. 6.1) for the ReSTOR®Toric +3.0 DIOLs in the first operative eyes (Table 13). Nine subjects (seven first eyes and two second eyes) had actual misalignments of 20 degrees or more on the day of surgery, of whom three had SSIs (repositioning surgeries) as a result of incorrect axis placement due to anatomical and/or surgical factors (refer to Precautions 4 and 10).

#### Table 13: Absolute Difference Between Intended Axis of Placement and Achieved Axis Placement (Degrees) at the Operative Visit (All Implanted Set)

	First Implanted Eye	Second Implanted Eye
	(n = 363)	(n = 366)
Mean (SD)	5.0 (6.1)	4.7 (4.0)
(Min, Max)	(0, 87)	(0, 36)
95% CI	(4.3, 5.6)	(4.2, 5.1)

The results for lens axis orientation at all postoperative visits were compared to those at surgery to determine lens axis rotation. The difference between the achieved lens axis orientation at month 12 and the achieved axis placement at surgery was  $2.7^{\circ} \pm 5.8$  in the first operative eyes and  $2.2^{\circ} \pm 2.7$  in the second operative eyes (Table 14). Lens axis rotation ranged from 1.4 to 2.7 degrees at all postoperative visits. Eight subjects had lens axis rotation of twenty degrees or more at month 12 month, two of whom had incorrect lens axis orientation measurements and three of whom underwent lens repositioning and have improved outcomes with the lens implanted (post repositioning rotation was less than 6 degrees). All eight subjects had improved visual performance at month 12.

### Table 14: Descriptive Statistics for the Absolute Difference Between Lens Axis Orientation at the Post-operative Visit and Achieved Axis Placement (Degrees) at the Operative Visit

(All Implanted Set)

		Absolut	e Rotation
		First Implanted Eye	Second Implanted Eye
Day 1	n	376	375
100	Mean (SD)	1.4 (1.8)	1.5 (1.7)
	(Min, Max)	(0,18)	(0, 14)
	95% Cl	(1.2, 1.6)	(1.3, 1.6)
1 week	n	375	366
	Mean (SD)	1.8 (2.3)	2.0 (2.7)
	(Min, Max)	(0, 23)	(0, 30)
	95% Cl	(1.6, 2.0)	(1.7, 2.2)
1 month	n	367	368
	Mean (SD)	2.2 (5.1)	2.1 (2.7)
	(Min, Max)	(0,85)	(0, 24)
	95% Cl	(1.6, 2.7)	(1.8, 2.4)
6 months	n	363	364
	Mean (SD)	2.3 (5.2)	2.3 (3.0)
	(Min, Max)	(0,85)	(0, 27)
	95% Cl	(1.7, 2.8)	(2.0, 2.6)
12 months	n	356	357
	Mean (SD)	2.7 (5.8)	2.2 (2.7)
	(Min, Max)	(0, 84)	(0, 24)
	95% CI	(2.1, 3.3)	(1.9, 2.5)

For subjects with missing Operative Visit axis placement data, Day1 (Visit 1) data were used as baseline

Furthermore, the rotational stability of the ReSTOR® Toric +3.0 D IOL was maintained between 2 consecutive visits at least 3 months apart (between 1 month and 6 months). As recommended by the 2010 ANSI standard for toric intraocular lenses, the data demonstrate that at least 90% of ReSTOR® Toric +3.0 D IOL subjects achieved a rotational stability of 5 degrees or less between 2 consecutive visits, at least 3 months apart (Table 15).

#### Table 15: Number and Percentage of Subjects by Lens Axis Rotation Between 1 Month and 6 Months (All Implanted)

		<b>ReSTOR® Toric +3.0</b>		
	200-000	n	(%)	
First Implanted Eye	Total	359	1.1.2.5	
	Lens Movement ≤ 5 degrees	338	(94.2)	
	Lens Movement >5 degrees	21	(5.8)	
Second Implanted Eye	Total	361		
and a state of the second state of the second	Lens Movement 5 degrees	339	(93.9)	
		-	-	

ReSTOR®Toric+3.0D = AcrySof®IQ ReSTOR®+3.0D Multifocal Toric IOL Models SND1T3/SND1T4/SND1T5/SND1T6 Subjects with missing observations at either 1 month or 6 months were excluded

#### **REDUCTION OF CYLINDER**

> 1.0D

The ReSTOR® Toric +3.0 DIOLs are effective in the reduction of corneal astigmatism in the range of 0.75 D to 2.82 D. As demonstrated in Table 16, the percent reduction in cylinder with respect to target cylinder was calculated and descriptive statistics were computed at each postoperative visit. Target cylinder was defined as the amount of anticipated residual astigmatism as calculated by the AcrySot®IQ ReSTOR®+3.0 D Multifocal Toric IOL Clinical Calculator.

#### Table 16: Number and Percentage of Subjects With Reduction of Cylinder Within the Target Cylinder at 1 year for ReSTOR® Toric +3.0 D (All Implanted)

	First Imp	lanted Eye	Second In	planted Eye
	(N = 373)		(N =	371)
	n	(%)	n	(%)
Within 0.5D	278	(74.5)	295	(79.5)
Within 1.0D	351	(94.1)	362	(97.6

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#### SAFETY

The incidences of cumulative adverse events for the ReSTOR® Toric +3.0 D IOL and the control ReSTOR® 4.0 D IOL as compared to the FDA historical grid rates are provided in Table 17. If the same event occurred multiple times in an eye, only the first occurrence is counted in the table below. The rate of secondary surgical interventions (SSIs) exceeded the FDA grid rate in the ReSTOR® Toric +3.0 D IOL group for the first and second eyes. The rate of secondary surgical interventions exceeded the FDA grid rate to the control ReSTOR® +4.0 D IOL group for the first and second eyes. The rate of secondary surgical interventions exceeded the FDA grid rate to the control ReSTOR® +4.0 D IOL group in the second eyes only. However, as shown in Table 18, a majority of the secondary surgical interventions were unrelated to the IOL and were due to other occular pathology. Table 17 includes the number of eyes that undervent a SSI while Table 18 is the number of actual SSIs (i.e., a single eye could have had more than 1 SSI) that occurred during the study. Details of the discrepancies in numbers are discussed in the footnotes of Table 18. There was a single occurrence of a persistent adverse event (adverse events in the FDA grid that are observed persistent adverse event rates in each eye did not exceed the Safety and Performance Endpoints (SPE) rates.

(5.9)

9

(2.4)

		Fit	st impl	anted	eye		Second implanted eye					
	ReSTOR® Toric +3.0 D (N = 386)		1	ReSTOR® +4.0 D (N = 188)		ReSTOR® Toric +3.0 D (N = 383)			ReSTOR® +4.0 D (N = 188)			
	N	%	SPE %	N	%	SPE %	N	%	SPE %	N	%	SPE %
Serious Adverse Events						-		000	1011	111		200
Cystoid macular edema	1	(0.3)	3.0	0	(0.0)	3.0	3	(0.8)	3.0	1	(0.5)	3.0
Endophthalmitis	0	(0.0)	0.1	0	(0.0)	0.1	0	(0.0)	0.1	0	(0.0)	0.1
Hypopyon	0	(0.0)	0.3	0	(0.0)	0.3	0	(0.0)	0.3	0	(0.0)	0.3
Lens dislocated from posterior cham ber	0	(0.0)	0.1	0	(0.0)	0.1	0	(0.0)	0.1	0	(0.0)	0.1
Pupillary block	0	(0.0)	0.1	0	(0.0)	0.1	0	(0.0)	0.1	0	(0.0)	0.1
Retinal detachment	1	(0.3)	0.3	0	(0.0)	0.3	2	(0.5)	0.3	1	(0.5)	0.3
Secondary surgical intervention	12	(3.1)	0.8	4	(2.1)	0.8	11	(2.9)	0.8	6	(3.2)	0.8
Persistent Serious Adverse Events		2 21	10									
Corneal edema	0	(0.0)	0.3	0	(0.0)	0.3	0	(0.0)	0.3	0	(0.0)	0.3
Cystoid macular edem a	- 1	(0.3)	0.5	0	(0.0)	0.5	1	(0.3)	0.5	0	(0.0)	0.5
Iritis	0	(0.0)	0.3	0	(0.0)	0.3	0	(0.0)	0.3	0	(0.0)	0.3
Raised IOP requiring treatment	0	(0.0)	0.4	0	(0.0)	0.4	0	(0.0)	0.4	0	(0.0)	0.4

#### Table 17: Serious and Persistent Adverse Events and SPE Rates (Safety)

ReSTOR® Toric + 3.0 D = AcrySof® IQ ReSTOR® + 3.0 D Multifocal Toric IOL Models SND1T3/SND1T4/SND1T5/SND1T6 ReSTOR® + 4.0 D = AcrySof® ReSTOR® Multifocal IOL (+4.0 D Add) Model SA60D3

	Firs	t Eye	Second Eye			
	ReSTOR® Toric +3.0 D (N=386)	ReSTOR® +4.0 D (N=188)	ReSTOR® Toric +3.0 D (N=383)	ReSTOR® +4.0 D (N=188)		
Secondary Surgical Intervention	15	5	13	6		
IOL repositioning due to IOL misalignment	1*	0	O	0		
OL repositioning due to inaccurate IOL placement	46.5	0	O	0		
OL repositioning due to haptic outside of the bag	1	0	0	0		
IOL replacement due to visual disturbances	0	2	0	2		
LASIK to correct residual refractive error	1	0	1	O		
Astigmatic keratotomyto correct residual refractive error (astigmatism)	1	0	0	0		
Limbal relaxing incision to correct surgically induced astigmatism	1	0	1	0		
Limbal relaxing incision to correct pre-existing astigmatism	0	1	0	1		
Macular hole repair	0	0	1	0		
YAG laser capsulotom y for wrinkles, folds or strands in capsule	1•	0	3	0		
Intraocular injection for wet age related macular degeneration	O	2ª	0	O		
Retinal detachment repair and prophylactic retinope xy	2	0	5•	1		
Retained lens removal	2	0	1	1		
Corneal wound leak repair	0	0	1	1		
Anterior vitrectomy	1	Ö	0	0		

#### Table 18: Secondary Surgical Interventions - First and Second Eyes

\*One subject required an IOL repositioning surgery at the 6 m onth visit. The Investigator considered the event related to the patient's eye anatomy and the IOL rotation was assumed to have occurred within the first 24 hours following surgery.

One subject experienced floppy iris during surgery and required two repositioning procedures. The same subject also experienced a YAG laser capsulotomy for wrinkled capsule in the first eye.

• The IOL was implanted at the incorrect axis in two subjects.

\*One subject was administered two intraocular injections for wet age related macular degeneration in the first eye.

 One subject had one prophylactic retinopexy procedure performed in the first eye and three retinopexy procedures performed in the second eye.

ReSTOR® Toric + 3.0 D = AcrySof® I Q ReSTOR® + 3.0 D Multifocal Toric IOL Models SND1T3/SND1T4/SND1T5/SND1T6 ReSTOR® + 4.0 D = AcrySof® ReSTOR® Multifocal IOL (+ 4.0 D Add) Model SA60D3

#### **Visual Disturbances**

A Patient Reported Outcomes instrument was developed and used in this clinical study to assess visual disturbances and distortions. The questionnaire administered was not validated according to FDA's guidance document entitled "Patient-reported outcome measures: use in medical product development to support labeling dains", dated December 2009. As demonstrated in Table 19, reports of visual disturbances/distortions were similar between the ReSTOR® Toric +3.0 D IOL and the control ReSTOR® +4.0 D IOL groups at 1 year. The highest rate of "severe" reports of visual disturbances/ distortions at 1 year was for halos at 7.5% for ReSTOR® Toric +3.0 D IOL and 11.0% for the control ReSTOR® +4.0 D IOL.

		Re	STOR®	Toric +3	.0 D		ReSTOR®+4.0 D			
Visual Disturbance	N	None %	Mild %	Mod <sup>a</sup> %	Severe %	N	None %	Mild %	Mod* %	Severe %
Glare	372	40.6	36.3	19.6	3.5	182	35.2	36.8	25.3	2.7
Halos	372	22.6	38.4	31.5	7.5	182	20.9	40.7	27.5	11.0
Starbursts	372	37.4	39.0	19.4	4.3	182	34.6	37.4	19.2	8.8
Hazy vision	372	55.1	33.1	10.5	1.3	182	51.6	30.8	17.0	0.5
Blurred vision	372	70.7	19.1	9.4	0.8	182	69.2	23.6	7.1	0.0
Distortion where straight lines look tilted	372	96.8	2.2	1.1	0.0	182	92.9	4.9	2.2	0.0
Distortion where flat lines look curved	372	96.5	3.2	0.3	0.0	182	94.0	4.9	1.1	0.0
Double vision	372	89.8	7.5	1.9	0.8	182	91.2	6.6	2.2	0.0
Color distortion	371	94.3	5.1	0.5	0.0	182	95.1	3.8	1.1	0.0
Feeling sick due to visual distortion	371	98.4	1.3	0.3	0.0	182	97.8	1.6	0.0	0.5

#### Table 19: Comparison of Visual Disturbances for ReSTOR® Toric +3.0 D and ReSTOR® +4.0 D 1 Year Postoperative (following second eye implantation)

\* Mod = Moderate

ReSTOR®Toric +3.0 D = AcrySof® IQ ReSTOR®+3.0 D Multifocal Toric IOL Models SND1T3/SND1T4/SND1T5/SND1T6 ReSTOR®+4.0 D = AcrySof® ReSTOR® Multifocal IOL (+4.0 D Add) Model SA60D3

#### Spectacle Independence

A subjective questionnaire consisting of sponsor-developed questions was used in the study to assess spectacle independence following implantation with the IOL. However, the questionnaire was not determined to be a psychom etrically valid assessment of "spectacle independence". Responses to items on this questionnaire were not meaningfully different between the two groups.

#### Glistenings

95.7 % of ReSTOR® Toric and 97.3% of ReSTOR® subjects had no observation of glistenings in the first implanted eye and 96.0% of ReSTOR® Toric and 97.3% of ReSTOR® subjects had no observation of glistenings in the second implanted eye. None of the observed glistenings were reported as clinically significant by the implanting surgeons.

#### **Prior Clinical Studies:**

2. AcrySof® ReSTOR® APODIZED DIFFRACTIVE OPTIC POSTERIOR CHAMBER MULTIFOCAL IOL CLINICAL STUDIES

Multicenter clinical studies were conducted in the United States and Europe to establish the safety and effectiveness of the AcrySof® ReSTOR® Apodized Diffractive Optic IOL (+4.0 D Add) (Models M A60D3 and SA60D3). A total of 566 first-eye implanted ReSTOR®IOL (440 Model MA60D3 and 126 Model SA60D3) and 194 AcrySof® Monofocal IOL Model MA60BM Control subjects comprise the All Implanted cohort. A Best Case cohort (subjects with no clinically significant preoperative ocular pathology or postoperative macular degeneration) consisted of 391 Model M A60D3 and 109 Model SA60D3 ReSTOR®IOL subjects and 172 Model MA60BM monofocal IOL subjects. Demographically, these studies consisted of 65.3% female and 34.7% male subjects. Stratified by race, subjects were 93.9% Caucasian, 2.6% Black, 0.9% Asian, and 2.5% designated "Other." The mean age for the total study population was 68.8 years.

#### **Visual Acuity**

ReSTOR® IOL subjects experienced a significant increase (≥ 2 lines) in uncorrected photopic and distance corrected photopic near vision as compared to monofocal control patients. The improvement in distance corrected near vision was greater under photopic than mesopic conditions. Mean spherical add power needed to achieve best corrected near visual acuity was higher under mesopic conditions (mean value of 2.5 D) than photopic conditions (range of mean values: 0.09 to 0.16 D). The average distance of best focus for near vision was approximately 2 cm closer than the predicted distance of 33 cm.

Results from a controlled dinical study revealed that maximum visual performance is achieved when implanted bilaterally. Binocularly implanted ReSTOR® IOL subjects achieved uncorrected and best corrected distance visual acuities similar to monofocal control subjects. When implanted monocularly, a statistically significant decrease ( $\leq$  2 letters) in mean uncorrected and best corrected distance visual acuity was observed in subjects with ReSTOR® IOLs as compared to the monofocal controls. Older subjects implanted with the ReSTOR® lens (e.g.,  $\geq$  80 years old), demonstrated a trend for poorer uncorrected distance visual acuity than the monofocal control patients.

#### **Binocular Visual Acuity**

The following is a summ ary of binocular visual acuity (VA) results for patients who completed the Form 4A (120-180 days after second eye implantation).





Figure 5: Combined 20/25 or Better Distance & 20/32 or Better Near Photopic Visual Acuity Binocular, Best Case 6 Months Postoperative



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		Sample size	20/20 (J1) or better	20/25 (J2) or better	20/32 (J4) or better	20/40 (J5) or better	Worse than 20/40 (J5)
		N	%	%	%	%	%
NG) 12 12	MA60D3	388	38.9	74.5	90.5	96.4	3.6
Uncorrected (Best Distance)	SA60D3	69	46.4	69.6	87.0	98.6	1.4
(Dest Distance)	Monofocal	157	3.2	14.0	23.6	40.8	59.2
Uncorrected (Standard Distance)	MA60D3	388	36.9	69.1	87.9	95.9	4.1
	SA60D3	69	42.0	69.6	87.0	98.6	1.4
	Monofocal	157	0.6	2.5	8.9	26.1	73.9
	MA60D3	387	45.5	76.2	92.5	97.9	2.1
Distance Corrected (Rest Distance)	SA60D3	69	43.5	76.8	88.4	97.1	2.9
(Desi Distance)	Monofocal	157	1.9	5.7	15.9	33.8	66.2
	MA60D3	387	47.5	77.5	93.8	97.9	2.1
Distance Corrected (Standard Distance)	SA60D3	69	44.9	76.8	89.9	98.6	1.4
(Stanuaru Distance)	Monofocal	157	0.6	3.8	8.3	21.0	79.0
65536 53637 - 655 - 244	MA60D3	387	54.3	85.0	96.4	98.4	1.6
Best Corrected	SA60D3	68	58.8	85.3	95.6	98.5	1.5
(Standard Distance)	Monofocal	157	52.9	79.6	94.3	96.8	3.2

#### Table 20: Cumulative Binocular Photopic Near Visual Acuity by Lens Model, All Implanted, 6 Months Postoperative

Table 21: Cumulative Binocular Photopic Distance Visual Acuity by Lens Model, All Implanted, 6 Months Postoperative

		Sample size	20/20 or better	20/25 or better	20/32 or better	20/40 or better	Worse than 20/40
		N	%	%	%	%	%
	MA60D3	388	64.2	88.1	95.1	99.2	0.8
Uncorrected	SA60D3	69	58.0	88.4	95.7	100.0	0.0
	Monofocal	157	70.7	91.7	94.9	97.5	2.5
Best Corrected	MA60D3	387	89.4	97.9	100.0	100.0	0.0
	SA60D3	69	88.4	100.0	100.0	100.0	0.0
	Monofocal	157	93.0	97.5	98.7	100.0	0.0

Monocular Visual Acuity The following is a summary of monocular visual acuity (VA) results for patients who completed the Form 4 (120-180 days after first eye implantation), and Form 5 (330-420 days after first eye implantation) exams.

		Sample size	20/20 (J1) or better	20/25 (J2) or better	20/32 (J4) or better	20/40 (J5) or better	Worse than 20/40 (J5)
		N	%	%	%	%	%
- 1924 - 192 - 19 - 192 - 193 - 193 - 193 - 193 - 193 - 193 - 193 - 193 - 193 - 193 - 193 - 193 - 193 - 193 - 193 - 193 - 193 - 1 - 193 - 193 - 193 - 193 - 193 - 193 - 193 - 193 - 193 - 193 - 193 - 193 - 193 - 193 - 193 - 193 - 193 - 193 - 1 - 193 - 193 - 193 - 193 - 193 - 193 - 193 - 193 - 193 - 193 - 193 - 193 - 193 - 193 - 193 - 193 - 193 - 193 - 1 - 193 - 193 - 193 - 193 - 193 - 193 - 193 - 193 - 193 - 193 - 193 - 193 - 193 - 193 - 193 - 193 - 193 - 193 - 1 - 193 -	MA60D3	407	27.3	51.8	74.9	86.2	13.8
Uncorrected (Best Distance)	SA60D3	110	28.2	53.6	79.1	90.0	10.0
(Dus Distinct)	Monofocal	176	1,1	5.7	12.5	26.1	73.9
Uncorrected	MA60D3	407	19.2	42.5	67.6	84.5	15.5
(Standard	SA60D3	110	19.1	41.8	67.3	85.5	14.5
Distance)	Monofocal	176	0.0	0.6	6.8	11.9	88.1
Distance	MA60D3	407	30.2	58.2	83.0	92.1	7.9
Corrected	SA60D3	110	30.9	63.6	86.4	94.5	5.5
(Best Distance)	Monofocal	176	0.6	2.3	9.1	21.6	78.4
Distance	MA60D3	407	26.8	59.0	81.1	92.9	7.1
Corrected	SA60D3	110	30.0	64.5	80.9	96.4	3.6
(Standard Distance)	Monofocal	176	0.6	1.1	3.4	11.4	88.6
Best Corrected	MA60D3	406	35.5	70.7	88.4	95.6	4.4
(Standard	SA60D3	110	36.4	77.3	90.0	97.3	2.7
Distance)	Monofocal	176	34.7	67.0	85.2	94.9	5.1

#### Table 22: Cumulative Monocular Photopic Near Vision by Lens Model, All Implanted, 6 Months Postoperative

Table 23: Cumulative Monocular Photopic Distance Vision by Lens Model, All Implanted, 6 Months Postoperative

		Sample size	20/20 or better	20/25 or better	20/32 or better	20/40 or better	Worse than 20/40
		N	%	%	%	%	%
Uncorrected SA60D3 Monofoca	MA60D3	407	33.2	59.2*	77.1*	90.2	9.8
	SA60D3	110	29.1	53.6*	80.0*	92.7	7.3
	Monofoc al	176	42.0	71.6	85.8	94.9	5.1
Best Corrected	MA60D3	407	7.3.5*	92.6	97.1	99.3	0.7
	SA60D3	110	77.3*	92.7	98.2	100.0	0.0
	Monofoc al	176	84.7	96.0	98.3	99.4	0.6

\*Statistically significant difference versus monofocal control

		Sample size	20/20 (J1) or better	20/25 (J2) or better	20/32 (J4) or better	20/40 (J5) or better	Worse than 20/40 (J5)
		N	%	%	%	%	%
Uncorrected	MA60D3	319	21.0	53.6	74.9	85.6	14.4
(Best Distance)	Monofoc al	89	3.4	4.5	11.2	19.1	80.9
Uncorrected	MA60D3	319	17.9	43.6	69.6	79.6	20.4
(Standard Distance)	Monofoc al	89	0.0	0.0	2.2	12.4	87.6
Distance Corrected	MA60D3	318	30.5	62.9	82.1	90.9	9.1
(Best Distance)	Monofoc al	89	0.0	1.1	3.4	14.6	85.4
Distance Corrected	MA60D3	319	29.5	60.5	80.6	90.3	9.7
(Standard Distance)	Monofoc al	89	0.0	1.1	2.2	9.0	91.0
Best Corrected	MA60D3	319	36.4	70.2	89.3	94.7	5.3
(Standard Distance)	Monofoc al	89	50.6	79.8	94.4	95.5	4.5

#### Table 24: Cumulative Monocular Photopic Near Vision by Lens Model, All Implanted, 1 Year Postoperative

Table 25: Cumulative Monocular Photopic Distance Vision by Lens Model,	
All Implanted, 1 Year Postoperative	

		Sample size	20/20 or better	20/25 or better	20/32 or better	20/40 or better	Worse than 20/40
		N	%	%	%	%	%
Uncorrected	MA60D3	319	30.1	58.9*	76.8*	90.0	10.0
	Monofocal	89	42.7	78.7	89.9	95.5	4.5
Best corrected	MA60D3	319	74.6*	93.4	97.8	99.1	0.9
	Monofocal	89	87.6	94.4	98.9	100.0	0.0

\*Statistically significant difference versus monofocal control

#### **Clinical Sub-studies**

#### Defocus

A binocular refraction defocus curve from the United States Intermediate Vision Study (34 AcrySof® ReSTOR® IOL MA60D3 All Implanted patients) displays two peaks, with one at the zero baseline corresponding to the distance focal point of the lens and one near the -3.0 D of correction, which corresponds to the near focal point of the lens. The distance peak of this curve demonstrates that ReSTOR® IOL patients achieved a mean distance visual acuity of 20/20 or better, with an additional increased depth of focus from -2.0 D to -4.5 D as compared to monofocal control patients (N=27). This additional increased depth of focus translates to a mean intermediate visual acuity of 20/40 or better and is most pronounced at near, with up to a five-line visual acuity improvement for patients implanted with a ReSTOR® IOL versus the monofocal control (Figure 6).



These data demonstrate that the ReSTOR®IOL provides a 4.5 diopter amplitude of functional (20/40 or better) vision (from optical infinity to approximately 22 cm). Binocular performance of the ReSTOR®IOL was approximately 0.5 lines better for near vision and 1.5 lines better for intermediate vision than the monocular performance of the ReSTOR®IOL. Additionally, the defocus curves were within 1 line among groups when stratified by pupil size (Figure 7).



#### Intermediate Vision

In addition to the clinical studies supporting the safety and effectiveness of AcrySof® ReSTOR®IOL Models M A60D3 and SA60D3, a parallel group (N=34), non-randomized, multi-center supplemental study was conducted in the U.S. to evaluate the performance of the AcrySof® ReSTOR®IOL Model M A60D3 for interm ediate vision compared to the monofocal control, AcrySof®IOL Model M A60DM. At a distance of 70 cm, the percentage of eyes achieving 20/20 or better uncorrected vision and 20/25 or better distance corrected vision was significantly worse for the ReSTOR®IOL as compared to the monofocal control. No statistical differences were observed between the ReSTOR®IOL and the monofocal control lens for uncorrected and distance corrected vision 20/32 or better when tested at 50, 60 or 70 cm.

#### Table 26: Intermediate Photopic Visual Acuity, Binocular, All Implanted

		Total Sample Size	Percent 20/40 or better			
			50 cm	60 cm	70 cm	
Uncorrected	ReSTOR®	34	82.4*	85.3	67.6	
	Control	27	59.3	66.7	63.0	
Distance Corrected	ReSTOR®	34	64.7	70.6	52.9	
	Control	27	59.3	66.7	77.8	

\*=Statistically different from control at 0.05 level

#### Low Contrast Visual Acuity and Contrast Sensitivity

Contrast sensitivity and low contrast acuity under various lighting conditions was clinically equivalent between ReSTOR® IOL and monofocal control patients. While there was a tendency for reduced contrast sensitivity and low contrast acuity in ReSTOR® IOL patients in low lighting (mesopic) conditions when exposed to a glare source, no differences in contrast sensitivity from the monofocal control exceeded more than 0.3 log units, and no difference in low contrast acuity exceeded more than 2 Shellen lines.

Low contrast acuity results were comparable between ReSTOR® IOL and monofocal control groups measured with Regan contrast charts at all light sources and gray scales (100%, 25% and 9%). Functional vision (20/40 or better) was maintained under photopic conditions at all gray scales with and without glare and under mesopic conditions at 100% and 25% with and without glare.

A Vector Vision (CSV1000) contrast sensitivity chart that employs a full range of sine wave gratings at 9 contrast levels and 4 spatial frequencies (3, 6, 12, and 18 cpd) was used to assess contrast sensitivity under photopic (85 cd/m<sup>2</sup>) and mesopic (2-5 cd/m<sup>3</sup>) conditions, with and without a glare source. Statistical and descriptive comparisons of contrast sensitivity of the AcrySof® ReSTOR® IOL versus the monofocal control indicate that, while there are measurable differences between the two groups at higher spatial frequencies when tested under the same photopic and mesopic conditions with and without glare, none of these differences exceeded 0.3 log units. At certain spatial frequencies, the AcrySof® ReSTOR® IOL Model SA60D3 performed statistically significantly better than the AcrySof® ReSTOR® IOL Model MA60D3 by at least 0.128 log units under monocular mesopic with and without glare conditions. Additionally, for monocular contrast sensitivity testing, there was no difference in the percentage of ReSTOR® IOL and monofocal IOL control patients who were not able to see any of the gratings. For binocular contrast sensitivity testing at least 85% of patients in both the ReSTOR®IOL and monofocal IOL control groups were able to see at least one grating, with the exception of mesopic with glare testing at 12 and 18 cycles per degree. At these spatial frequencies, the percentage of ReSTOR® IOL patients able to see at least one grating ranged from 85.9% - 75.0% as compared to 95.8% - 90.6% of monofocal control patients.

#### Table 27: Mean Log Decrease in Contrast Sensitivity ReSTOR® IOL Compared to Monofocal Control Under Photopic, Mesopic and Glare Conditions, Monocular, All Implanted, 6 Months Postoperative

Light Source (‡)	Model	A(3)	B(6)	C(12)	D(18)
	MA60D3	-0.02	-0.04	-0.09	-0.05
Photopic w/o Giare	SA60D3	0.01	-0.03	-0.12	-0.09
	MA60D3	-0.06	-0.15	-0.15	-0.15
Photopic w Glare	SA60D3	-0.05	-0.14	-0.18	-0.16
	MA60D3	0.00	-0.12	-0.13	-0.09
Mesopic wo Giare	SA60D3	0.00	-0.02	0.00	-0.04
Mesopic w/ Glare	MA60D3	-0.08	-0.11	-0.12	-0.12
	SA60D3	-0.01	-0.04	-0.02	-0.06

#### Table 28: Mean Log Decrease in Contrast Sensitivity ReSTOR® IOL Compared to Monofocal Control Under Photopic, Mesopic and Glare Conditions, Binocular, All Implanted, 6 Months Postoperative

			Spatial Fre	quency (c/d)	
Light Source (‡)	Model	A(3)	B(6)	C(12)	D(18)
Photopic wo Glare	MA60D3	-0.03	-0.11	-0.17	-0.12
	SA60D3	-0.06	-0.15	-0.21	-0.16
<b>DI</b> ( )	MA60D3	-0.07	-0.23	-0.22	-0.17
Photopic W/ Grare	SA60D3	-0.10	-0.24	-0.23	-0.24
Manager and Chang	MA60D3	-0.06	-0.12	-0.26	-0.18
Mesopic w/o Giare	SA60D3	-0.07	-0.17	-0.23	-0.19
Mesopic w/ Glare	MA60D3	-0.15	-0.24	-0.25	-0.19
	SA60D3	-0.07	-0.24	-0.23	-0.21

#### Summary of Driving Sub-study (Models MA60D3 and SA60D3)

Night driving performance was tested using the NDS (Night Driving Simulator) developed and validated by Vision Sciences Research, Corp. in bilaterally implanted subjects (23 subjects implanted with ReSTOR® IOL Model MA60D3 and 25 subjects implanted with monofocal control Model MA60BM) were tested to determine visibility distances for the detection and identification of road warning signs, message signs and road hazards under various conditions (clear [normal], inclement weather [fog] and glare conditions). The simulated driving scenes using the NDS (Night Driving Simulator) were a city street at night with streetlights and a rural highway with low beam headlights.

It is important to realize that there are no absolute detection and identification distances for all targets to determine safety and efficacy. Actual visibility distances, excluding individual differences, will depend upon the target size, contrast (sign age, dean or dirty sign), background clutter (oncoming vehicle headlights, street and store lights) and vehicle headlight condition (low or high beams, clean or dirty lens). The NDS was designed to provide similar visibility distances to that of similar targets reported in the literature. One could use other targets in the real world and obtain other visibility distances; however, those distances would be relevant only for the conditions noted above, such as age and condition of the target, and would change over time. Therefore, safety and efficacy analysis can only be based on relative differences between the lenses, not absolute values. Visibility distance values could be biased to allow a very large difference between lenses to satisfy stopping distance requirements by making the simulator targets visible at very large distances or, conversely, visibility distance values could be biased to allow a very large distances or, conversely, visibility distance values could be biased to allow a wery large distances or, conversely, visibility distance values could be biased to allow a very large distances end to be biased to allow a very small difference between lenses to satisfy stopping distance requirements by making the simulator targets visible at very large distances expression the actual target visibility distance values could be biased to allow a very large distances expression and we very targe distances or, conversely, visibility distance values could be biased to allow a very small distances. With this in mind, further analysis uses the actual target visibility distance examples first reported in the validation study literature for the NDS.

The ability of ReSTOR® IOL (Models M A60D3 and SA60D3) subjects to detect and identify road signs and hazards at night was similar to the monofocal control Model M A60BM under norm al visibility driving conditions.

#### Sign Identification

#### **Rural Driving Conditions**

The mean visibility distances, standard deviation and percentage difference of monofocal (Model MA80BM) and ReSTOR® IOL (Model MA80D3) subjects for sign identification under normal, fog and glare conditions in the rural scene are shown in Table 29.

Both fog and glare are seen to cause larger differences between the monofocal and ReSTOR®IOL Model MA60D3 subject performance than the clear night condition. However, in all instances the mean differences were less than 15%.

Identification I	Identification Distance		ens	Differences	% Loss
(feet)		Control ReSTOR®		Unterence	over Control
Visibility Condition	Targets	040 + 57	000 + 44	10	7.5.00
N awa at	Text	249 ± 57	230 ± 41	19	7.5%
Normal	Warning	523 ± 68	476 ± 81	47	8.9 %
20202	Text	248 ± 42	215±50	33	13.4 %
Fog	Warning	512 ± 89	453 ± 88	60	11.6 %
Glare	Text	228 ± 56	195 ± 52	33	14.1 %
	Warning	512 ± 89	448 ± 83	64	12.5 %

Table 29: Mean (+ SD)	Sign Identification Distances in Dural S	0000
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#### **City Driving Conditions**

The mean visibility distances, standard deviation and percentage difference of monofocal (Model MA60BM) and ReSTOR® IOL Model MA60D3 subjects for sign identification under normal, fog and glare conditions in the city scene are shown in Table 30.

Under glare conditions, the ability of the ReSTOR® IOL Model MA60D3 subjects to identify the text sign is reduced on average by 28%, however there was only a small difference under these conditions for the warning sign.

Identification Distance (feet)		Lens		Difference	% Loss
		Control	ReSTOR®	Difference	Over Control
Visibility Condition	Targets	160 ± 30	143 ± 31	17	10.8 %
Normal	Text				
	Warning	211 ± 26	201 ± 25	10	4.7 %
Fog	Text	159 ± 24	138 ± 34	21	13.2 %
	Warning	208 ± 23	184 ± 31	24	11.7 %
Glare	Text	142 ± 33	102 ± 46	40	28 %
	Warning	194 ± 26	170 ± 28	24	12.5 %

#### **Detecting Hazards**

#### Rural Conditions

The mean visibility distances, standard deviation and percentage difference of monofocal (Model MA60BM) subjects and ReSTOR®IOL (Model MA60D3) subjects for hazard detection under normal, fog and glare conditions in the rural scene are shown in Table 31. In rural conditions, all differences for detecting hazards were less than 20%.

Table 31: Hazard Detection Distances in Rural Scene

Detection Distance	Lens		Diff	% Loss
(feet)	Control	ReSTOR®	Unterence	Over Control
Visibility Condition				
Normal	511 ± 80	474 ± 87	37	7.2 %
Fog	507 ± 92	465 ± 101	42	8.5 %
Glare	480 ± 98	386 ± 150	94	19.7 %

#### **City Conditions**

The mean hazard detection, standard deviation and percentage differences for control (Model MA60BM) subjects and ReSTOR®IOL (Model MA60D3) subjects for hazard detection under normal, fog and glare conditions in the city scene are shown in Table 32. For city conditions, in all instances the mean differences were less than 15%.

#### Table 32: Hazard Detection Distances in City Scene

Detection Distance	Lens		D:#	% Loss
(feet)	Control	ReSTOR	Difference	Over Control
Visibility Condition				
Normal	200 ± 52	183 ± 38	17	8.5 %
Fog	229 ± 66	211 ± 65	18	7.9 %
Glare	190 ± 67	166 ± 48	24	12.6 %

#### **Retinal Detail**

No difficulties in retinal treatment were encountered by any investigator in the study. However, one investigator had 20 reports of loss of retinal detail (i.e., the fundus appeared more anterior).

#### Quality of Life/Spectacle Independence

Patient reported spectacle independence was determined using the Cataract TyPE Specification instrument (Javitt, 1997). ReSTOR®IOL spectacle independence rates were statistically better (p<0.0001) than the control rates.


Figure 8: Frequency of Spectacle Wear Distance Vision, Bilateral Comparison









# Table 33: Patient Satisfaction with Vision (without glasses)

		MA60D3	SA60D3	Control
	Baseline	0.6 (N=311)	0.5 (N=126)	0.6 (N=1 93)
Overall	Unilateral	2.6* (N=309)	2.5 (N=124)	2.4 (N=184)
	Bilateral	3.5** (N=268)	3.4** (N=69)	3.0 (N=155)
12	Baseline	0.9 (N=311)	0.7 (N=126)	0.8 (N=194)
Day Vision	Unilateral	2.7* (N=309)	2.6 (N=123)	2.5 (N=185)
	Bilateral	3.5** (N=269)	3.4** (N=68)	3.0 (N=156)
38 88 1	Baseline	0.6 (N=311)	0.5 (N=126)	0.6 (N=193)
Night Vision	Unilateral	2.4 (N=309)	2.5 (N=124)	2.4 (N=185)
	Bilateral	3.3** (N=269)	3.2* (N=69)	2.9 (N=156)

Satisfaction Scale (0-4): 0=not at all satisfied, 4=completely satisfied.

\*=Significantly different from control at 0.05 level \*\*=Significantly different from control at 0.01 level

# Table 34: Self Rating of Vision (without glasses)

	MA60D3	SA60D3	Control
Baseline	4.2 (N=313)	4.1 (N=125)	4.1 (N=194)
Unilateral	Unilateral (N=307)		6.9 (N=185)
B ilateral	8.7* (N=266)		7.9 (N=155)

Rating Scale (0-10): 0=worst possible vision, 10=best possible vision

\*=Significantly different from control at 0.01 level

## Adverse Events

The incidences of cumulative adverse events for the ReSTOR® IOL as compared to the FDA historical grid rates are provided in Table 35. A single occurrence of retinal detachment/repair, single occurrence of pupillary block, and surgical reinterventions exceeded the FDA Grid rate. No occurrences of persistent adverse events (adverse events in the FDA grid that are observed at the 12 month postoperative visit) were observed in any patients implanted with the ReSTOR®IOL.

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	ReSTOR® MA60D3 (N=440)		ReSTOR® SA60D3 (N=126)		FDA Grid rate*	
	N	%	N	%	%	
Cumulative Adverse Events						
Endophthalmitis	0	0.0	0	0.0	0.1	
Macular Edem a	12	2.7	1	0.8	3.0	
Retinal Detachment/Repair		0.0	<u>1</u>	0.8	0.3	
Hyphema	0	0.0	0	0.0	2.2	
Pupillary block	1	0.2	0	0.0	0.1	
LensDislocation	0	0.0	0	0.0	0.1	
Surgical reintervention	10	2.3	2	1.6	0.8	
IOL replacement for biometry error	2	0.5	0	0.0	NA	
IOL replacement for incorrect power/operating room error	2	0.5	0	0.0	NA	
IOL replacement for visual disturbance	1	0.2	0	0.0	NA	
IOL replacement for decentered IOL due to trauma	1	0.2	0	0.0	NA	
IOL replacement due to patient dissatisfaction	0	0.0	1	0.8	NA	
Laser treatment	3	0.7	<u></u> :1	0.8	NA	
Fibrin removal	1	0.2	0	0.0	NA	
Persistent Adverse Events:	l. I			1		
Macular Edem a	0	0.0	0	0.0	0.5	
Raised IOP Requiring Treatment	0	0.0	0	0.0	0.4	
Corneal Edema	0	0.0	0	0.0	0.3	
Iritis	0	0.0	0	0.0	0.3	

\*FDA draft guidance on Monofocal Intraocular Lenses, Annex B (October 14, 1999)

# Visual Disturbances

With the exception of blurred near vision and problems with color perception, the monofocal control patients had a lower rate of severe observations than the ReSTOR®IOL patients (Table 36). Of the 440 subjects implanted with ReSTOR®IOL Model MA60D3 and 126 subjects implanted with Model SA60D3, one subject implanted with ReSTOR®IOL Model MA60D3 required lens explantation due to visual disturbances.

Mount Disturbance	ReST Model M	OR® MA60D3	ReST Model S	OR® A60D3	Monofocal Control		
visual disturbance	% Moderate	% Severe	% Moderate	% Severe	% Moderate	% Severe	
Glare/Flare	20.1	4.9	23.2	4.3	7.1	1.9	
Problems with Night Vision	8.5	4.1	10.1	2.9	3.8	1.9	
Halos	18.0	4.4	23.2	7.2	1.9	1.3	
Distorted Near Vision	0.8	0.8	0.0	0.0	0.6	0.0	
Distorted Far Vision	1.0	0.3	0.0	0.0	0.6	0.0	
Blurred Near Mision	5.9	0.8	7.2	0.0	12.8	3.8	
Blurred Far Vision	5.9	1.0	5.8	0.0	3.2	0.6	
Double Vision in both eyes	1.5	0.8	1.4	0.0	1.3	0.0	
Problems with Color Perception	0.5	0.0	0.0	0.0	0.0	0.0	

### Table 36: Visual Disturbances, 6 Months Postoperative (Following second eye implantation)

# 3. AcrySof® NATURAL SINGLE-PIECE IOL CLINICAL STUDY (Model SB30AL)

A clinical study was conducted on subjects receiving the AcrySof® Natural Single Piece IOL Model SB30AL as compared to the AcrySof® UV Single Piece IOL Model SA30AL. The results achieved by the subjects successfully followed for a minimum of one year postoperatively provided reasonable assurance of safety and effectiveness of the AcrySof® Natural Single Piece IOL Model SB30AL for the visual correction of aphakia.

## Summary of Color Perception Study

Color perception testing using the Famsworth D-15 P anel Test was conducted on all subjects at the 120 to 180 day postoperative period. Of the 109 subjects with normal color vision implanted with the AcrySof® Natural IOL Model SB30AL in the first operative eye and examined at the 120-180 day postoperative visit, 107 (98.2%) passed the color perception test. Of the 102 subjects with normal color vision implanted with a AcrySof® UVIOL Model SA30AL in the first operative eye and examined at the 120-180 day postoperative UVIOL Model SA30AL in the first operative eye and examined at the 120-180 day postoperative usit, 97 (95.1%) passed the color perception test. There were no statistically significant differences between AcrySof® Natural IOL Model SB30AL and AcrySof® UVIOL Model SA30AL for the percent of subjects that passed the color perception test at the 120 to 180 day postoperative visit. Therefore, the addition of the proprietary chromophore does not negatively affect color vision in subjects with normal color vision.

# **HOW SUPPLIED**

The AcrySot® IQ ReSTOR® +3.0 D M uttitocal Toric IOL Models SND1T3, SND1T4, SND1T5 and SND1T6 are supplied dry, in a package term inally sterilized with ethylene oxide, and must be opened only under aseptic conditions (see DIRECTIONS FOR USE).

# EXPIRATION DATE

Sterility is guaranteed unless the pouch is damaged or opened. The expiration date is clearly indicated on the outside of the lens package. Any lens held after the expiration date should be returned to Alcon Laboratories, Inc. (see RETURNED GOODS POLICY).

# RETURNED GOODS POLICY

In the United States, returned lenses will only be accepted in exchange for other products, not credit. All returns must be accompanied by an Alcon Laboratories, Inc. Returned Goods Number and should be shipped via traceable means. A Returned Goods Number is obtained by contacting Alcon Laboratories, Inc. Customer Service Department. Issuance of this number does not constitute final acceptance of the returned products. For detailed policy guidelines including exchange, please contact your Sales or Customer Service Representative.

Outside the United States, contact your local Alcon office or distributors regarding the Returned Goods Policy.

# REFERENCES

Boettner, E.A. and Wolter, J.R., Transmission of the Ocular Media. Invest. Ophthalmol. 1:776-783, 1962.

Symbols Used on Labeling

SYMBOL	ENGLISH			
IOL	Intraocular lens			
PC	P osterior chamber			
PCL	Posterior chamber lens			
UV	Ultraviolet			
D	Diopter (Spherical Equivalent)			
CYL	Cylinder Power			
Øs	Body diameter (Optic diameter)			
Ø,	Overall diameter (Overall length)			
8	Do not reuse			
	Use by date			
STERILE EO	Sterilized using ethylene oxide			
SN	Serial Number			
	Caution			
	Manufacturer			
113 F 45*C	Upper Limit of Temperature			



Manufacturer: Alcon Laboratories, Inc. 6201 South Freeway Fort Worth, Texas 76134-2099 USA

U.S. Pat.: www.alconpatents.com

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By Ross, Steve

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# Appendix B: Directions for Use for ACRYSOF IQ RESTOR +2.5 D Multifocal Toric IOLs (Models SV25T3, SV25T4, SV25T5, and SV25T6)

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STERILE UV and Blue Light Filtering Acrylic Foldable Single-piece Apodized Diffractive Aspheric Multifocal Toric Posterior Chamber Intraocular Lens



# **DESCRIPTION**

The AcrySof®IQ ReSTOR®+2.5 D Apodized Diffractive Aspheric Multifocal Toric Posterior Chamber Intraocular Lens (IOL) is an ultraviolet and blue light filtering foldable multifocal toric intraocular lens. The optical portion consists of a proprietary high refractive index hydrophobic acrylic material with a blue light filtering chromophore which filters light in a manner that approximates the human crystalline lens in the 400-475 nm blue light wavelength range (Boettner and Wolter, 1962). The optical portion is biconvex and consists of a soft acrylic material capable of being folded prior to insertion, allowing placement through an incision smaller than the optic diameter of the lens. After surgical insertion into the eye, the lens gently unfolds to restore the optical performance. The biconvex optic contains an aspheric apodized diffractive structure with a central refractive zone on the anterior surface and a toric posterior surface. The apodized diffractive structure divides incoming light to provide a range of functional vision (defined as visual acuity of 20/40 or better) from distance to near. The anterior surface of the AcrySof® IQ ReSTOR® + 2.5 D Multifocal Toric IOL Models SV25T3 through SV25T6 is designed with negative spherical aberration to compensate for the positive spherical aberration of the cornea. The effects of this aspheric design feature have not been clinically assessed. Compared to other Alcon AcrySof® IQ ReSTOR® Multifocal Toric IOL models (Models SND1T3 to SND1T6), these IOLs (Models SV25T3 to SV25T6) provide an alternate option for clinicians to offer patients with astigmatism with the near add power of +2.5 D, with optimal vision at 53 cm and greater distance dominance in the energy distribution between near and far. The physical properties of these lenses are described in Figures 1-3 and Table 1.

1



Models SV25T3-SV25T6

Table 1: Physical Characteristics of AcrySof®1Q ReSTOR® +2.5 D Multifocal Toric IOLs

Physical Characteristic	Model						
	SV25T3	SV25T4	SV25T5	SV25T6			
OpticType	Biconvex optic hav centr	Biconvex optic having an anterior, aspheric, apodized diffractive surface wit central refractive zone, and a posterior toric surface					
Lens Material	Ultraviolet and blue light filtering Acrylate/Methacrylate Copolymer						
UV cutoff at 10% T	401 nm for 21 D (See Figure 2)						
Index of Refraction	1.55						
Optic Powers (spherical equivalent diopters)	+6.0 - +30.0 (0.5 diopter increments) with a +2.5 Diopter add power						
IOL Cylinder Power (Diopters)	1.50	2.25	3.00	3.75			
Haptic Configuration		STABLEFOR	CE®Haptic				
Optic Diameter/Ø <sub>B</sub> (mm)	6.0						
Overall Length/Ø <sub>T</sub> (mm)		13.	)				
Haptic Angle		0°					



NOTE:
 Hum an crystalline lens data from Boettner and Wolter (1962).

Figure 3: Theoretical Percentage of Light Energy at 550 nm Wavelength



# MODE OF ACTION

The AcrySof® IQ ReSTOR® +2.5 D Multifocal Toric IOLs are intended to be positioned in the posterior chamber of the eye, replacing the natural crystalline lens. This position allows the lens to function as a refractive medium in the correction of aphakia. This IOL has a biconvex optic containing an aspheric apodized diffractive structure with a central refractive zone on the anterior surface. The apodized diffractive structure divides incoming light to provide a range of functional vision (defined as visual acuity of 20/40 or better) from distance to near. This IOL provides an alternate option for clinicians to offer patients with an add power of +2.5 D designed to provide optimal vision at 53 cm. Additionally, these IOLs have a toric component on the posterior surface with axis marks to denote the flat meridian (plus cylinder axis). Alignment of the toric axis marks with the post-operative steep corneal meridian allows the lens to correct pre-existing corneal astigmatism. The astigmatic correction at the corneal plane for the AcrySof® IQ ReSTOR® +2.5 Multifocal Toric IOLs is shown in Table 2:

# Table 2: Cylinder Power and Corneal Astigmatism Correction Range

	Cyline	der Power	Recommend Corneal Astigmatism Range			
Lens Model	IOL Plane	Corneal Plane*	Lower	Upper		
SV25T3	1.50	1.03	0.75	1.28		
SV25T4	2.25	1.55	1.29	1.80		
SV25T5	3.00	2.06	1.81	2.32		
SV25T6	3.75	2.57	2.33	2.82		

\*Based on an average pseudophakic human eye

#### INDICATIONS

The AcrySof® IQ ReSTOR®+2.5D Multifocal ToricIOLs are intended for primary implantation in the capsular bag of the eye for the visual correction of aphakia secondary to removal of a cataractous lens and pre-existing corneal astigmatism in adult patients with and without presbyopia, who desire reduction of refractive cylinder and near, intermediate, and distance vision with increased spectacle independence.

### IOL IMPLAN TATION

During implantation of the AcrySof® IQ ReSTOR® +2.5 D Multifocal Toric IOL, an Alcon qualified delivery system and viscoelastic combination should be used. The use of an unqualified combination may cause damage to the lens and potential complications during the implantation process. Alcon recommends using the qualified MONARCH® IOL Delivery System or any other Alcon qualified combination. For a full list of Alcon qualified viscoelastics, handpieces, and cartridges for this lens, please contact your local Alcon representative.

#### WARNINGS

- 1. Some visual effects may be expected due to the superposition of focused and unfocused multiple images. These may include some perceptions of halos or radial lines around point sources of light (starbursts) under nighttime conditions, glare, double vision, haziness and blurred vision. As with other multifocal IOLs, there is a possibility that visual symptoms may be significant enough that the patient will request explant of the multifocal toric IOL.
- A reduction in contrast sensitivity as compared to a monofocal IOL may be experienced by some patients and may be more prevalent in Iowlighting conditions. Therefore, patients implanted with multifocal toric IOLs should exercise caution when driving at night or in poor visibility conditions.
- The physician should consider the following points that are unique to the use of AcrySof®IQ ReSTOR® +2.5 D Multifocal Toric IOLs
  - The surgeon must target emmetropia to achieve optimal visual performance.
    - The surgeon should target the lowest possible residual astigmatism. Patients with significant postoperative astigmatism >1.0 D m ayn ot achieve optimal visual outcom es.
  - Care should be taken to achieve IOL centration as lens decentration may result in a patient experiencing visual disturbances under certain lighting conditions.
  - Patients should be advised that unexpected outcomes could lead to continued spectacle dependence or the need for secondary surgical intervention (e.g., intraocular lens replacement or repositioning).
- 4. Rotation of the AcrySof®IQ ReSTOR®+2.5 D Multifocal Toric IOLs away from their intended axis can reduce the astigmatic correction. Misalignment greater than 30° may increase postoperative refractive cylinder. If necessary, lens repositioning should occur as early as possible prior to lens encapsulation. Some clinical cases suggest encapsulation is complete within four weeks of implantation.
- This lens should not be implanted if the posterior capsule is ruptured, if the zonules are damaged, or if a primary posterior capsulotomy is planned.
- Carefully remove all viscoelastic from both the anterior and posterior sides of the lens. Residual viscoelastic may cause complications including lens rotation resulting in misalignment of the AcrySof® IQ ReSTOR®+2.5 D Multifocal Toric IOL with the intended axis of placement.

### **PRECAUTIONS**

- Prior to surgery, prospective patients should be informed of the possible risks and benefits associated with the AcrySof®IQ ReSTOR®+2.5 D Multifocal ToricIOL Models SV25T3-SV25T6. A Patient Information Brochure can be found in the labeling information section under the link to Products at http://www.myalcon.com.Please provide a copy of the Patient Information Brochure to the patient.
- 2. As with all multifocal IOLs, spectacle independence rates will vary. Platients may need glasses when reading small print or looking at small objects.
- Posterior capsule opacification (PCO) may significantly affect the vision of patients with multifocal IOLs sooner in its progression than patients with monofocal IOLs. This may be due to the reduced contrast sensitivity observed with multifocal IOLs.
- The safety and effectiveness of the AcrySof® IQ ReSTOR® +2.5 D Multifocal Toric IOL have not been substantiated in patients with the following pre-existing and intraoperative conditions.

# Pre-existing Conditions

- Choroidal hemorrhage
- Concomitant severe eye disease
   Significant irregular corneal aberration
- Retinal conditions or predisposition to retinal conditions, previous history of, or a predisposition to, retinal detachment or proliferative diabetic retinopathy, in which future treatment may be compromised by implanting this lens
  - [This precaution is included because multifocal IOLs may decrease the level of retinal detail on exam or during treatment slightly and this could make laser and retinal surgeries and the diagnosis of some conditions more challenging (for example, early diabetic retinopathy when only 1 or 2 microaneurysms are present)].
- Subjects with diagnosed degenerative visual disorders (e.g., macular degeneration or other retinal disorders) that are predicted (by subjective assessment of the retina) to cause future acuity losses to a level worse than 0.2 logMAR
- Amblyopia
- Clinically severe corneal dystrophy (e.g., epithelial, stromal, or endothelial dystrophy), keratitis, keratoconjunctivitis, keratouveitis, keratopathy, or kerectasia
- Any inflammation or edema (swelling) of the cornea
- Rubella, congenital, traumatic, or complicated cataracts
- Extremely shallow anterior chamber, not due to swollen cataract
- Recurrent anterior or posterior segment inflamm ation of unknown etiology, or any disease producing an inflamm atory reaction in the eye (e.g., iritis or uveitis)
- Aniridia
- Iris neovascularization
- Glaucoma (uncontrolled or controlled with medication)
- Microphthalmos
- Optic nerve atrophy
- Previous corneal transplant
- Pre-existing ocular conditions which may negatively impact stability of the implant
- Color vision deficiencies
  - [Studies have shown that color vision discrimination is not adversely affected in individuals implanted with the AcrySof® Natural IOL and normal color vision. The effect of the AcrySof® Natural IOL in subjects with hereditary color vision defects and acquired color vision defects secondary to ocular disease (e.g., glaucoma, diabetic retinopathy, chronic uveitis, and other retinal or optic nerve diseases) has not been studied].
- Previous retinal detachment
- Diabetic retinopathy
- Previous refractive surgery
- Cervical dystonia or spasmodic torticollis
  - [These conditions may interfere with the pre-operative surgical plan or IOL axis orientation during surgery. Patients with IOL misalignment may not achieve the visual acuity of patients without such problem s and may require IOL repositioning.]
- Pregnancy

#### Intraoperative Conditions

- Other planned ocular surgery procedures, including but not limited to, LASIK, astigmatic keratotomy, and limbal relaxing incisions
- Excessive iris mobility/Intraoperative Floppy Iris Syndrome
- Mechanical or surgical manipulation required to enlarge the pupil
- Dilated pupil size less than 4.5 mm just prior to implantation
- Vitreous loss (significant)
- Anterior chamber bleeding (significant)
- Uncontrolled positive intraocular pressure
- Complications in which the IOL stability could be compromised, including, but not limited to:
  - Zonular damage, separation, or rupture
  - Capsulotomy by any technique other than a circular tear
  - The presence of radial tears known or suspected at the time of surgery
  - · Situations in which the integrity of the circular tear cannot be confirmed by direct visualization
  - Cataract extraction by techniques other than phacoemulsification or liquefaction
  - Situations where the need for a large capsulotomy can be anticipated (e.g., diabetics, retinal detachment in the felloweye, peripheral retinal pathology, etc.)
  - Capsular rupture or capsulorhexis tear.
  - Bag-sulcus, sulcus-sulcus, or unknown placement of the haptics

As with the implantation of any IOL, careful preoperative evaluation and sound clinical judgment should be used by the surgeon to decide the benefit/risk ratio before implanting a lens in a patient with one or more of these conditions.

- Patients with preoperative problem s such as corneal endothelial disease, abnormal cornea, macular degeneration, retinal degeneration, glaucoma, and chronic drug missis may not achieve the visual acuity of patients without such problems. The physician must determine the benefits to be derived from lens implantation when such conditions exist.
- When binocular implantation of the AcrySof® IQ ReSTOR® +2.5 D Multifocal Toric IOL is planned, both eyes of a subject are not intended to be operated on the same day. Simultaneous binocular implantation has not been studied.
- A high level of surgical skill is required for intraocular lens implantation. The surgeon should have observed and/or assisted in numerous implantations and successfully completed one or more courses on intraocular lens implantation before attempting to implant intraocular lenses.
- 8. As with any surgical procedure, there is risk involved. Potential complications accompanying cataract or implant surgery may include, but are not limited to, the following: corneal endothelial damage, infection (endophthalmitis), retinal detachment, vitritis, cystoid macular edema, corneal edema, pupillary block, cyclitic membrane, iris prolapse, hypopyon, transient or persistent glaucoma, and secondary surgical intervention. Secondary surgical intervention or iridectomy for pupillary block, wound leak repair, and retinal detachment repair.
- The relevant clinical studies supporting the use of this lens were conducted with the lens intended for implantation in the capsular bag only. There are no clinical data to demonstrate its safety and effectiveness for placement in the cliary sulcus.
- 10. Anatomic and/or surgical factors may be related to the likelihood that a toric IOL could be placed incorrectly or rotate away from the intended position after placement. Some of these factors can be identified before or during the surgery, but others cannot. If a secondary surgical intervention is necessary to reposition the IOL, explanation should also be considered as some subjects may have recurrent or persistent issues related to rotational instability and misalignment.
- 11. Do not re-sterilize these intraocular lenses by any method.
- 12. Do not store intraocular lenses at temperatures over 45° C (113° F).
- 13. Use only sterile intraocular irrigating solutions (such as BSS<sup>®</sup> or BSS PLUS<sup>®</sup> solution) to rinse and/or soak lenses.
- 14. Accurate keratometry and biometry in addition to the use of the AcrySof®IQ ReSTOR®+2.5 D Multifocal Toric IOL Calculator (http://www.myalcon-toriccalc.com)
- 15. All preoperative surgical parameters are important when choosing a toric lens for implantation, including preoperative keratometric cylinder (magnitude and axis), incision location, surgeon's estimated surgically induced astigmatism (SIA) and biometry. Variability in any of the preoperative measurements can influence patient outcomes and the effectiveness of treating eyes with lower amounts of preoperative corneal astigmatism.
- 16. In the clinical study of the AcrySof® IQ ReSTOR® +3.0 D Multifocal Toric IOL all corneal incisions were placed temporally and a surgically induced astigmatism (SIA) input value of 0.0 diopters was used in the AcrySof® IQ ReSTOR® +3.0 D Multifocal Toric IOL Calculator (http://www.myalcon-toriccalc.com). The SIA input value of 0.0 diopters was derived from an assumed 0.25 diopter with-the-rule vector SIA from the temporal incision which was to be compensated by an assumed average 0.25 diopter against-the-rule posterior corneal astigmatism in the dinical study. The marketed AcrySof®IQ ReSTOR® +3.0 D Multifocal Toric IOL Calculator allows the surgeon to customize the incision site and SIA based on the surgeon's clinical judgement. Clinical outcomes using incision site or SIA input value different than used in the clinical study have not been evaluated.

#### **CALCULATION OF LENS POWER**

Accurate keratometry and biometry is essential for successful visual outcomes. Preoperative calculation of required spherical equivalent lens power for the AcrySof® IQ ReSTOR ® +2.5 D Multifocal Toric IOL should be determined by the surgeon's experience and preference. A reference SRK/T A-Constant value for optical biometry equipment such as IOLMaster<sup>†</sup> or LenStar<sup>†</sup> is listed on the outer label. This reference A-Constant anticipates the use of both corneal power and axial length values from optical biometry equipment with standard settings for a typical patient population and a spectacle far point at 6 meters. IOL power calculation methods are often included with biometry equipment, and they are also described in the references below. In general, lens constants must be "personalized" to compensate for such things as differences in instrumentation, surgical techniques, and IOL power calculation methods that may exist between different clinical sites.

<sup>†</sup>IOLMaster is a trademark of Carl Zeiss; Len Star is a trademark of HAAG-STREIT.

IOL power calculation methods are often included with biometry equipment, and they are also described in the following references:

Hoffer KJ. The Hoffer Q formula: a comparison of theoretic and regression formulas. J Cataract Refract Surg. 1993;19(6):700-12.

Holladay JT. Standardizing constants for ultrasonic biometry, keratometry, and intraocular lens power calculations. J Cataract Refract Surg. 1997;23(9):1356-70.

Olsen T. Calculation of intraocular lens power: a review. *Acta Ophthalmol Scand*. 2007;85(5):472-85. Retzlaff JA, Sanders DR, Kraff M. *Lens Implant Power Calculation*. 3rd ed. Thorofare (NJ): Slack, Inc.; 1990. http://www.augenklinik.uni-wuerzburg.de/ulib/index.htm AcrySof® IQ ReSTOR® +2.5 D Multifocal Toric IOLs are labeled with the IOL spherical equivalent power. In order to optimize IOL selection and axis placement, Alcon provides an AcrySof® IQ ReSTOR® +2.5 D Multifocal Toric IOL calculator for the surgeon. Use of the AcrySof® IQ ReSTOR® +2.5 D Multifocal Toric IOL calculator (http://www.myalcon-toriccalc.com) is recommended to select the cylinder power of AcrySof® IQ ReSTOR® +2.5 D Multifocal Toric IOL Calculator (http://www.myalcon-toriccalc.com) is recommended to select the cylinder power of AcrySof® IQ ReSTOR® +2.5 D Multifocal Toric IOL. The astigmatism to be corrected should be determined from keratometry and biometry data rather than refractive data since the presence of lenticular astigmatism in the crystalline lens to be removed may influence results. The size and location of the surgical incision may affect the amount and axis of corneal astigmatism. Pre-operative keratometry and biometry data, incision location (a temporal incision was used in the clinical study of the AcrySof® IQ ReSTOR® +3.0 D Multifocal Toric IOL), and the surgeon's estimated surgically induced corneal astigmatism are used to determine the appropriate AcrySof® IQ RESTOR® +2.5 D Multifocal Toric IOL model, spherical equivalent lens power, and axis of placement in the eye.

# Selection and Placement of the AcrySof® IQ ReSTOR®+2.5 D Multifocal Toric IOL

For optimal results, the surgeon must ensure the correct placement and orientation of the lens within the capsular bag. The posterior surface of the IOL is marked with indentations (three at each end) at the haptic/optic junction that identify the flat meridian of the AcrySof® IQ ReSTOR® +2.5 D Multifocal Toric optic. These indentations form an imaginary line representing the plus cylinder axis (note: IOL cylinder steep meridian is 90° away). The AcrySof® IQ ReSTOR® +2.5 D Multifocal ToricIOL cylinder axis marks should be aligned with the post-incision steep correal meridian (intended axis of placement) or as determined by the AcrySof® IQ ReSTOR® +2.5 D Multifocal Toric IOL calculator.

Prior to surgery mark the operative eye with at least two reference points. Alcon recommends one of the following methods for marking the eye: 1) with the patient sitting upright, clearly and precisely mark the two reference positions with a surgical skin marker or a marking pen, or 2) with the subject sitting upright, use an axis marker to clearly and precisely mark the intended axis of the IOL placement identified by the web-based AcrySof® IQ ReSTOR® +2.5 D Multifocal Toric IOL calculator. Using these marks as reference points, an axis marker can be used immediately prior to or during surgery to mark the axis of lens placement following the use of the AcrySof®IQ ReSTOR® +2.5 D Multifocal Toric IOL calculator to determine the optimal axis of placement.

After the lens is inserted, precisely align the axis marking indentations on the AcrySof®IQ ReSTOR®+2.5 D Multifocal Toric IOL with the marked axis of lens placement. Carefully remove all viscoelastic (Viscoat OVD was used in the clinical studies for the ReSTOR®+2.5 D Multifocal IOL and the ReSTOR®+3.0 D Multifocal Toric IOL) from both the anterior and posterior sides of the lens. This may be accomplished by manipulating the IOL optic with the I/A tip and using standard irrigation/aspiration techniques to remove all viscoelastic from the eye. Bimanual techniques may be used, if preferred, to ensure removal of viscoelastic from behind the lens implant. Special care should be taken to ensure proper positioning of the AcrySof®IQ ReSTOR®+2.5 D Multifocal Toric IOL at the intended axis following viscoelastic removal. Residual viscoelastic may allow the lens to rotate causing misalignment of the AcrySof®IQ ReSTOR®+2.5 D Multifocal Toric IOL with the intended axis of placement.

Misalignment of the axis of the lens with the intended axis of placement may compromise its astigmatic correction. Such misalignment can result from inaccurate keratometry or marking of the cornea, inaccurate placement of the AcrySof® IQ ReSTOR® +2.5 D Multifocal Toric IOL axis during surgery, an unanticipated surgically induced change in the cornea, or physical rotation of the AcrySof® IQ ReSTOR® +2.5 D Multifocal Toric IOL axis during surgery. An unanticipated surgically induced change in the cornea, or physical rotation of the AcrySof® IQ ReSTOR® +2.5 D Multifocal Toric IOL after implantation. In order to minimize this effect, the surgeon should be careful to ensure that preoperative keratometry and biometry is accurate and that the IOL is properly oriented prior to the end of surgery.

#### **DIRECTIONS FOR USE**

- Examine the label on the unopened outer package for model, powers (base, cylinder and add), proper configuration, and expiration date.
- After opening the outer package, verify lens prim ary package label information (e.g., model, power, serial number) is consistent with information on outer package labeling.
- This device is sterile until the inner pouch is opened. Inspect the pouch carefully for tears, cuts, punctures, or other signs that the pouch has been opened or damaged. DO NOT implant the IOL if the sterility has been compromised (see RETURNED GOODS POLICY).
- To remove the lens, open the undamaged pouch and transfer the case to a sterile environment. Carefully open the case to expose the lens.
- 5. To minimize the occurrence of marks on the lens due to handling, all instrumentation should be scrupulously clean. Any forceps used for lens handling must have round edges and smooth surfaces.
- 6. When removing the lens from the case, DO NOT grasp the optical area with forceps. The IOL should only be handled by the haptics. Handle lenses carefully to avoid damage to lens surfaces or haptics. DO NOT attempt to reshape haptics in any way.
- 7. Prior to insertion, the lens should be carefully examined to ensure that particles have not adhered during handling.
- 8. There are various surgical procedures that can be used, and the surgeon should select a procedure that is appropriate for the patient. Current techniques, appropriate instrumentation, and a list of their equivalents for delivery and implantation are available from Alcon. Surgeons should verify that appropriate instrumentation is available prior to surgery.
- 9. DO NOT reuse this IOL. This device is for single use only.

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# PATIENT REPORTING AND REGISTRATION

Events that reasonably suggest that the lens may have caused or contributed to death or serious injury, including events occurring as a result of failure of a medical device to meet its performance specifications or otherwise perform as intended, should be reported to Alcon Laboratories, Inc. This information is being requested from all surgeons in order to document potential long-term effects of intraocular lens implantation. Surgeons in the United States should use the following address and telephone number for reporting adverse events involving these intraocular lenses:

Alcon Laboratories, Inc. Medical Safety 6201 South Freeway Fort Worth, TX 76134-2099 Call Toll Free: 1-800-757-9780 in the United States

Outside the United States, contact local Alcon offices or distributors regarding any reports of adverse events.

The Patient Identification Card included in the package is to be completed and given to the patient, together with instructions to keep the card as a permanent record to be shown to any eye care practitioner that the patient consults in the future.

In the United States, each patient must be registered with Alcon Laboratories, Inc., immediately following implantation of one of these lenses. Registration is accomplished by completing the Implant Registration Card that is enclosed in the lens box and mailing it to Alcon Laboratories, Inc. Patient registration is essential for the long-term patient follow-up program and will assist Alcon Laboratories, Inc., in responding to reports of adverse events.

### CLINICAL STUDIES

The data from a recent clinical study of the AcrySof® IQ ReSTOR® +2.5 D Multifocal IOL Model SV25T0, and data from three relevant prior clinical studies are included in this section:

- A clinical study was conducted to assess the safety and effectiveness of the AcrySof®IQ ReSTOR® +2.5 D Multifocal IOL Model SV25T0.
- 2. A prior clinical study, including assessment of color perception, was conducted to demonstrate the safety and effectiveness of the AcrySof®Natural single-piece monofocal IOL Model SB30AL. The AcrySof®IQ ReSTOR® +2.5 D Multifocal Toric IOL Models SV25T3-SV25T6 are also single-piece IOLs using the same material mechanical platform and the same blue filtering chromophore, as the Model SB30AL. The data showed the blue filtering chromophore did not have an effect on color perception in subjects with normal color vision prior to surgery. These results provide an expanded description of the safety profile expected of the AcrySof®IQ ReSTOR® +2.5 D Multifocal ToricIOL Models SV25T3-SV25T6.
- 3. A prior clinical study, including a night driving simulator sub-study, was conducted to demonstrate the safety and effectiveness of the non-blue-filtering multi-piece and single-piece AcrySof® ReSTOR® Models M A60D3 and SA60D3. The AcrySof® IQ ReSTOR® +2.5 D Multifocal Toric IOL Models SV25T3-SV25T6 use an apodized diffractive optic as in Models MA60D3 and SA60D3. The safety data (adverse events and night driving simulation results) from this study provide an expanded ded sv25T3-SV25T6.
- 4. A dinical study was conducted to assess the safety and effectiveness of the AcrySof® IQ ReSTOR® +3.0 D Multifocal ToricIOL Models SND1T3 to SND1T6. The AcrySof® IQ ReSTOR® +2.5 D Multifocal ToricIOL Models SV25T3-SV25T6 are also multifocal toricIOLs using the same cylinder power design.

Summaries of these clinical studies are provided below. Please use caution when comparing these results with results from similar device studies due to potential differences in patient cohorts, test methods, etc.

## 1. AcrySof®IQ ReSTOR®+2.5 D MULTIFOCAL INTRAOCULAR LENS (IOL) (Model SV25T0)

The AcrySof®IQ ReSTOR®+2.5 D Multifocal Intraocular Lens (IOL) study was a prospective, multicenter, randomized, masked (to subjects and vision examiners), controlled clinical investigation designed to assess the safety and effectiveness of the AcrySof® IQ ReSTOR®+2.5 D Multifocal Intraocular Lens Model SV25T0 in adult subjects secondary to removal of a cataractous lens with and without presbyopia. A total of 320 subjects were implanted in this clinical study, with 155 subjects receiving IOL Model SV25T0 and 165 subjects receiving the monofocal control lens Model SN60WF. In the data tables in this section, "+2.5 D Multifocal" refers to Model SV25T0 and "Monofocal" refers to Model SN60WF.

The study population consisted of 60.3% females and 39.7% males. Subjects were 91.3% White, 6.6% Black or African American, 0.9% Asian, 0.6% American Indian or Alaska Native, 0.3% multi-race, and 0.3% designated "Other." Five percent (5%) of the study population designated ethnicity as Hispanic. A Best Case cohort (subjects with no preoperative ocular pathology or postoperative macular degeneration and no major protocol deviations) consisted of 145 AcrySof@IQ ReSTOR® +2.5 D Multifocal IOL Model SV25T0 subjects and 149 Monofocal Control subjects. The mean age for the study population was 69.0 ± 9.0 years. The length of subject follow-up was 6 months.

# Mean Visual Acuity

Monocular visual acuity results are presented for first implanted eyes. AcrySof® IQ ReSTOR® +2.5 D Multifocal IOL subjects experienced a significant increase in distance corrected photopic monocular near vision (at 40 cm) as compared to monofocal control subjects. The mean photopic monocular distance corrected visual acuity at 40 cm for subjects implanted with the AcrySof® IQ ReSTOR® +2.5 D Multifocal IOL was 0.206 logMAR (~2 lines on an ETDRS visual acuity chart) better than those implanted with the monofocal lens (p < 0.001).

AcrySof® IQ ReSTOR® +2.5 D Multifocal IOL subjects also experienced a significant increase in distance corrected photopic monocular intermediate vision (at 53 cm) as compared to the monofocal control subjects. The mean photopic monocular distance corrected visual acuity at the 53 cm test distance for subjects implanted with the AcrySof® IQ ReSTOR® +2.5 D Multifocal IOL was 0.190 logMAR better (~2 lines) than for those implanted with the monofocal lens (p < 0.0001).

Descriptive statistics for monocular (first eye implanted) and binocular mean distance corrected near (33 cm and 40 cm), intermediate (53 cm and 60 cm), and distance (4 m) visual acuity (VA) are shown in Table 3. AcrySof®IQ ReSTOR® +2.5 D Multifocal IOL subjects achieved uncorrected and best corrected mean distance visual acuities similar to those of the monofocal control subjects.

	55	+	2.5 D Multifo	cal	Monofocal			
		(N=155)			(N=165)			
5		n	Mean	SD	n	Mean	SD	
VA@4m	Monocular - First Eye	153	0.02	0.122	160	0.00	0.107	
	Binocular	153	-0.04	0.100	159	-0.06	0.102	
VA@ 60 cm	Monocular - First Eye	153	0.33	0.174	160	0.43	0.169	
	Binocular	153	0.23	0.143	159	0.34	0.162	
VA@ 53 cm	Monocular - First Eye	153	0.32	0.172	159	0.52	0.182	
	Binocular	153	0.24	0.145	158	0.40	0.161	
VA@40 cm	Monocular - First Eye	153	0.43	0.170	160	0.64	0.184	
	Binocular	153	0.34	0.151	159	0.52	0.182	
VA @ 33 cm	Monocular - First Eye	153	0.56	0.175	160	0.70	0.189	
č	Binocular	153	0.47	0.168	159	0.60	0.190	

# Table 3: Distance Corrected Visual Acuity (logMAR) at 6 Months Postoperative, All Implanted

### Categorical Binocular Visual Acuity

Categorical binocular visual acuity (VA) results for subjects at 6 months postoperative are summarized in Tables 4-5 below. Each column shows the proportion of subjects achieving the indicated visual acuity for each test condition. Table 4 provides binocular photopic visual acuity at 40 cm, 53 cm, 60 cm, and at best distance. The best distance is the near distance at which each subject held the near visual acuity chart to obtain his or her best visual outcome. Table 5 provides binocular photopic visual acuity at distance (4 m). The percentage of subjects achieving 20/20 visual acuity at distance (4 m) was similar between the two IOLs.

	Lens Model	Sample Size	20/20	20/25	20/32	20/40	20/50	20/63	Worse than 20/63
		N	%	%	%	%	%	%	%
Distance Corrected at 60 cm	+2.5 D Multifocal	153	11.1	22.2	28.8	20.3	11.8	4.6	1.3
	Monofocal	159	4.4	8.8	22.0	16.4	28.9	12.6	6.9
Uncorrected at 60 cm	+2.5 D Multifocal	153	9.2	19.0	26.8	24.2	12.4	7.2	1.3
	Monofocal	159	6.3	20.1	22.6	18.9	14.5	8.8	8.8
Distance Corrected at 53 cm	+2.5 D Muttifocal	153	9.2	22.2	24.2	19.6	15.7	7.2	2.0
	Monofocal	158	1.3	3.8	14.6	15.8	27.2	22.8	14.6
Uncorrected at 53 cm	+2.5 D Multifocal	153	9.2	15.7	25.5	22.2	17.6	7.8	2.0
	Monofocal	158	3.2	7.0	21.5	24.7	17.7	14.6	11 .4
Best Corrected at 40 cm	+2.5 D Multifocal	153	29.4	29.4	20.9	12.4	7.2	0.0	0.7
	Monofocal	159	52.2	20.1	15.1	9.4	1.3	1.3	0.6
Distance Corrected at 40 cm	+2.5 D Multifocal	153	1.3	7.2	22.2	26.8	23.5	9.8	9.2
	Monofocal	159	0.0	1.9	3.8	13.8	19.5	20.8	40.3
Uncorrected at 40 cm	+2.5 D Multifocal	153	2.0	13.1	15.7	24.8	20.9	14.4	9.2
	M onofocal	159	0.0	3.1	13.2	15.1	18.9	17.0	32.7
Distance Corrected at best distance	+2.5 D Multifocal	153	7.8	15.0	20.3	20.9	13.7	15.0	7.2
	Monofocal	159	0.6	5.0	10.7	18.9	11.9	21.4	31.4
Uncorrected at best distance	+2.5 D Multifocal	153	4.6	13.1	19.0	25.5	18.3	8.5	11.1
	Monofocal	159	4.4	7.5	13.8	17.0	15.1	20.1	22.0

Table 4: Categorical Binocular Photopic Visual Acuity (60, 53, and 40 cm, and Best Distance)
by Lens Model, All Implanted, 6 Months Postoperative

Table 5: Categorical Binocular Photopic Distance Visual Acuity (4 m) by Lens Model, All Implanted, 6 Months Postoperative

	Lens Model	Sample Size	20/20	20/25	20/32	20/40	20/50	20/63	Worse than 20/63
		N	%	%	%	%	%	%	%
Best Corrected	+2.5 D Multifocal	153	88.2	9.2	1.3	1.3	0.0	0.0	0.0
	Monofocal	159	90.6	6.9	1.3	0.6	0.0	0.6	0.0
Uncorrected	+2.5 D Multifocal	153	75.8	19.0	0.7	2.6	1.3	0.0	0.7
	Monofocal	159	77.4	15.1	6.3	1.3	0.0	0.0	0.0

# Categorical Monocular Visual Acuity

The following is a summary of categorical monocular visual acuity (VA) results for the first eyes implanted with the AcrySof® IQ ReSTOR® +2.5 D Multifocal IOL Model SV25T0 and monofocal control IOL Model SN60WF at 6 months postoperative. The data are summarized in Tables 6-7 below Each column shows the categorical proportion of subjects achieving the indicated visual acuity for each test condition. Table 6 provides categorical monocular photopic visual acuity at 40 cm, 53 cm, and at best distance. The best distance is the near distance at which each subject held the near visual acuity chart to obtain his or her best visual outcome. Mean monofocal control IOL at 53 cm and 40 cm. Table 7 provides categorical monocular photopic visual acuity at distance (4 m). The percentage of subjects achieving 20/20 visual acuity at distance (4 m) was fairly similar between the +2.5 D Multifocal IOLs.

	Lens Model	Sample Size	20/20	20/25	20/32	20/40	20/50	20/63	Worse than 20/63
		N	%	%	%	%	%	%	%
Distance Corrected at 53 cm	+2.5 D Multifocal	153	2.0	14.4	19.0	27.5	13.7	16.3	7.2
	Monofocal	159	0.0	1.3	6.3	11.3	15.7	25.8	39.6
Uncorrected at 53 cm	+2.5 D Multifocal	153	2.6	5.2	15.0	26.1	24.8	11.8	14.4
	Monofocal	159	0.0	5.0	9.4	16.4	18.2	19.5	31.4
Best Corrected at 40 cm	+2.5 D Multifocal	153	18.3	28.1	20.9	17.0	9.8	2.6	3.3
	Monofocal	160	30.6	33.1	16.9	8.1	6.3	2.5	2.5
Distance Corrected at 40 cm	+2.5 D Multifocal	153	1.3	3.9	10.5	18.3	27.5	18.3	20.3
	Monofocal	160	0.0	0.0	2.5	3.8	10.0	14.4	69.4
Uncorrected at 40 cm	+2.5 D Multifocal	153	0.7	4.6	11.1	11.8	24.8	22.9	24.2
	Monofocal	160	0.0	0.0	6.3	6.3	16.3	14.4	56.9
Distance Corrected at best distance	+2.5 D Multifocal	153	3.3	7.8	17.0	16.3	21.6	13.1	20.9
	Monofocal	160	0.0	1.3	4.4	9.4	16.3	21.9	46.9
Uncorrected at best distance	+2.5 D Multifocal	153	2.0	6.5	10.5	24.2	17.0	17.6	22.2
	Monofocal	160	0.6	5.0	8.8	11.3	13.1	18.8	42.5

Table 6: Categorical Monocular Photopic Visual Acuity (53 cm, 40 cm, and Best Distance)
by Len's Model, Primary Eye, All Implanted, 6 Months Postoperative

Table 7: Categorical Monocular Photopic Distance Visual Acuity (4 m) by Lens Model, Primary Eye, All Implanted, 6 Months Postoperative

	Lens Model	Sample Size	20/20	20/25	20/32	20/40	20/50	20/63	Worse than 20/63
	1 -	N	%	%	%	%	%	%	%
Best Corrected	+2.5 D Multifocal	153	71.9	17.0	7.2	2.6	0.7	0.0	0.7
	Monofocal	160	75.0	16.3	7.5	0.6	0.6	0.0	0.0
Uncorrected	+2.5 D Multifocal	153	39.2	35.3	13.7	5.9	4.6	0.7	0.7
	Monofocal	160	46.9	25.0	16.9	8.1	2.5	0.0	0.6

# **Binocular Defocus Curves**

A binocular refraction defocus curve shows two peaks, with one at the zero baseline position, which corresponds to the distance corrected binocular visual acuity obtained at the distance focal point of the lens, and one near the -2.0 D position, which corresponds to the distance corrected binocular visual acuity obtained at the distance focal point of the lens, and one near the -2.0 D position, which corresponds to the distance corrected binocular visual acuity obtained at the intermediate focal point of the lens (53 cm). The distance peak of this curve demonstrates that AcrySof® IQ ReSTOR® IOL subjects achieved a mean distance visual acuity of 20/20 or better with an additional increased depth of focus from +2.0 D to -2.75 D, as compared to monofocal control subjects. This additional increased depth of focus translates to a mean intermediate visual acuity of 20/32 or better at the intermediate distances, most pronounced around 53 cm, with almost a two line visual acuity improvement for subjects implanted with a AcrySof® IQ ReSTOR® +2.5 D Multifocal IOL versus the monofocal control (Figure 4).



# Figure 4: Mean Defocus Curves by Lens Model, Binocular, Best Case, 1 Month Postoperative

### Contrast Sensitivity

Binocular best corrected distance contrast sensitivity was performed using a sine wave grating chart (VectorVision CSV1000E) at the 4-6 month exam under four conditions photopic without glare, photopic with glare, mesopic without glare, and mesopic with glare.

Descriptive statistics including mean and median contrast scores, standard deviations (SD), ranges (Min, Max), and two-sided 90% confidence intervals are provided for the AcrySof®IQ ReSTOR®+2.5 D Multifocal IOL Model SV25T0 group and for the Model SN60WF monofocal IOL group under each photopic lighting condition and spatial frequency (Table 8) and each mesopic lighting condition and spatial frequency (Table 9). For some measurement conditions, one or more patients could not see any contrast gratings for a specific spatial frequency, therefore the values shown with'<" are overestimates and the standard deviations shown with ">" are underestimates. The number and percent of subjects unable to see any gratings for each specific measurement condition/spatial frequency are shown in the table in the "Number Scoring (-1)" rows. The percentage of subjects who could not see any gratings and the standard for the grave of subjects who could not see any gratings for each specific measurement condition/spatial frequency are shown in the table in the "Number Scoring (-1)" rows. The percentage of subjects who could not see any gratings are graved from 0.8% (3 cpd, photopic without glare) to 31.6% (12 cpd, mesopic with glare) in the AcrySof®IQ ReSTOR® +2.5 D Multifocal IOL Model SN60WF monofocal IOL group.

		Without	Glare	With Glare			
		+2.5 D Multifocal	Monofocal	+2.5 D Multifocal	Monofocal		
Frequency		(N=133)	(N=137)	(N = 133)	(N =137)		
3 CPD	Not Assessed	1 (0.8%)	4 (2.9%)	1 (0.8%)	4 (2.9%)		
	Number Assessed	132 (99.2%)	133 (97.1%)	132 (99.2%)	133 (97.1%)		
	Number Scoring (-1)	1 (0.8%)	0 (0.0%)	2 (1.5%)	2 (1.5%)		
	Number with Data for Analysis	131 (98.5%)	133 (97.1%)	130 (97.7%)	131 (95.6%)		
	Mean	<1.676	1.743	<1.608	<1.692		
	Median	<1.633	1.785	<1.633	<1.785		
	SD	>0.259	0.203	>0.307	>0.274		
	(Min, Max)	(<0.70, 2.08)	(1.18, 2.08)	(<0.70, 2.08)	(<0.70, 2.08)		
	CI	(<1.639, 1.714)	(1.714, 1.773)	(<1.563, 1.653)	(<1.652, 1.732)		
6 CPD	Not Assessed	1 (0.8%)	4 (2.9%)	1 (0.8%)	4 (2.9%)		
	Number Assessed	132 (99.2%)	133 (97.1%)	132 (99.2%)	133 (97.1%)		
	Number Scoring (-1)	2 (1.5%)	0 (0.0%)	15 (11.3%)	8 (5.8%)		
	Number with Data for Analysis	130 (97.7%)	133 (97.1%)	117 (88.0%)	125 (91.2%)		
	Mean	<1.816	1.938	<1.684	<1.844		
	Median	<1.845	1.996	<1.699	<1.845		
	SD	>0.256	0.251	>0.316	>0.309		
	(Min, Max)	(<0.90, 2.29)	(1.20, 2.29)	(<0.90, 2.29)	(<0.90, 2.29)		
	CI	(<1.778, 1.853)	(1.902, 1.974)	(<1.636, 1.733)	(<1.798, 1.889)		
12 CPD	Not Assessed	1 (0.8%)	4 (2.9%)	1 (0.8%)	4 (2.9%)		
	Number Assessed	132 (99.2%)	133 (97.1%)	132 (99.2%)	133 (97.1%)		
	Number Scoring (-1)	3 (2.3%)	1 (0.7%)	15 (11.3%)	6 (4.4%)		
	Number with Data for Analysis	129 (97.0%)	132 (96.4%)	117 (88.0%)	127 (92.7%)		
	Mean	<1.460	<1.555	<1.334	<1.475		
	Median	<1.544	≺1.544	<1.398	<1.544		
	SD	>0.312	>0.312	>0.321	>0.336		
	(Min, Max)	(<0.60,2.00)	(<0.60, 2.00)	(<0.60, 2.00)	(<0.60, 2.00)		
	CI	(<1.414, 1.505)	(<1.510, 1.599)	(<1.285, 1.383)	(<1.426, 1.524)		
18 CPD	Not Assessed	1 (0.8%)	4 (2.9%)	1 (0.8%)	4 (2.9%)		
	Number Assessed	132 (99.2%)	133 (97.1%)	132 (99.2%)	133 (97.1%)		
	Number Scoring (-1)	2 (1.5%)	2 (1.5%)	13 (9.8%)	5 (3.6%)		
	Number with Data for Analysis	130 (97.7%)	131 (95.6%)	119 (89.5%)	128 (93.4%)		
	Mean	<0.970	<1.109	<0.914	<1.043		
	Median	<0.978	<1.114	<0.978	<1.114		
	SD	>0.348	>0.325	>0.333	>0.361		
	(Min, Max)	(<0.18, 1.56)	(<0.18, 1.56)	(<0.18, 1.56)	(<0.18, 1.56)		
	CI	(<0.919, 1.021)	(<1.062,1.156)	(<0.863,0.964)	(<0.990, 1.096)		

# Table 8: Descriptive Statistics for Binocular Photopic Contrast Sensitivity at Visit 4A (4-6 months postoperative, Best Case Population)

SD = Standard Deviation

CI = Two-sided 90% Confidence Interval

CPD = CydesPerDegree

The score was set to (-1) when a subject could not complete a sensitivity measurement. For mean and variability estimations, scores of (-1) were excluded from the calculations. Hence the corresponding mean and median measures are overestimated and variability measures are underestimated.

Column header is number of subjects in the best case population

Number assessed is number in the best case population minus number not assessed.

Number with data for analysis is number assessed minus number scoring (-1).

		Without	t Glare	With (	Glare
		+2.5 D Multifocal	Monofocal	+2.5 D Multifocal	Monofocal
Frequency		(N=133)	(N=137)	(N =133)	(N=137)
1.5 CPD	Not Assessed	1 (0.8%)	4 (2.9%)	1 (0.8%)	4 (2.9%)
	Number Assessed	132 (99.2%)	133 (97.1%)	132 (99.2%)	133 (97.1%)
	Number Scoring (-1)	4 (3.0%)	2 (1.5%)	5 (3.8%)	4 (2.9%)
	Number with Data for Analysis	128 (96.2%)	131 (95.6%)	127 (95.5%)	129 (94.2%)
	Mean	<1.594	<1.622	<1.536	<1.596
	Median	<1.595	<1.595	<1.520	≺1.670
	SD	>0.224	>0.204	>0.237	>0.238
	(Min, Max)	(<0.83, 1.97)	(<1.07, 1.97)	(<0.90, 1.97)	(<0.98,1.97)
	сі	(<1.562, 1.627)	(<1.593, 1.652)	(<1.501, 1.570)	(<1.561,1.631
3 CPD	Not Assessed	1 (0.8%)	4 (2.9%)	1 (0.8%)	4 (2.9%)
	Number Assessed	132 (99.2%)	133 (97.1%)	132 (99.2%)	133 (97.1%)
	Number Scoring (-1)	1 (0.8%)	1 (0.7%)	4 (3.0%)	3 (2.2%)
	Number with Data for Analysis	131 (98.5%)	132 (96.4%)	128 (96.2%)	130 (94.9%)
	Mean	<1.563	<1.618	<1.542	<1.600
	Median	<1.564	<1.633	<1.562	<1.599
	SD	>0.267	>0.226	>0.292	>0.296
	(Min, Max)	(<0.70, 2.08)	(<1.00, 2.08)	(<0.70, 2.08)	(<-0.35, 2.08)
	сі	(<1.525, 1.602)	(<1.586, 1.651)	(<1.499, 1.585)	(<1.557, 1.643
6 CPD	Not Assessed	1 (0.8%)	4 (2.9%)	1 (0.8%)	4 (2.9%)
	Number Assessed	132 (99.2%)	133 (97.1%)	132 (99.2%)	133 (97.1%)
	Number Scoring (-1)	10 (7.5%)	3 (2.2%)	18 (13.5%)	7 (5.1%)
	Number with Data for Analysis	122 (91.7%)	130 (94.9%)	114 (85.7%)	126 (92.0%)
	Mean	<1 .581	<1.673	<1.543	<1.617
	Median	<1.628	<1.663	<1.556	<1.620
	SD	>0.296	>0.275	>0.329	>0.277
	(Min, Max)	(<0.90, 2.29)	(<0.90, 2.29)	(<0.90, 2.29)	(<0.90, 2.29)
	сі	(<1.537, 1.625)	(<1.633, 1.713)	(<1.492, 1.594)	(<1.577, 1.658
12 CPD	Not Assessed	1 (0.8%)	4 (2.9%)	1 (0.8%)	4 (2.9%)
	Number Assessed	132 (99.2%)	133 (97.1%)	132 (99.2%)	133 (97.1%)
	Number Scoring (-1)	30 (22.6%)	21 (15.3%)	42 (31.6%)	28 (20.4%)
	Number with Data for Analysis	102 (76.7%)	11 2 (81.8%)	90 (67.7%)	105 (76.6%)
	Mean	<1.077	<1.208	<1.043	<1.153
	Median	<1.079	<1.167	<0.929	<1.079
	SD	>0.363	>0.345	>0.385	>0.375
	(Min, Max)	(<0.60, 2.00)	(<0.60, 2.00)	(<0.60, 2.00)	(<0.60, 2.00)
	CI	(<1.017, 1.136)	(<1.154, 1.262)	(<0.975, 1.110)	(<1.092, 1.214

### Table 9: Descriptive Statistics for Binocular Mesopic Contrast Sensitivity at Visit 4A (4-6 months postoperative, Best Case Population)

SD = Standard Deviation

CI = Two-sided 90% Confidence Interval

CPD = Cycles Per Degree

The score was set to (-1) when a subject could not complete a sensitivity measurement.

For mean and variability estimations, scores of (-1) were excluded from the calculations. Hence the corresponding mean and median measures are overestimated and variability measures are underestimated.

Column header is number of subjects in the best case population

Number assessed is number in the best case population minus number not assessed.

Number with data for analysis is number assessed minus number scoring (-1).

Mesopic contrast tests were conducted twice and the official sensitivity was defined as the mean of the two individual measures. The mean score was (-1) if either or both of the individual scores were (-1).

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# Adverse Events

The safety of the AcrySof® IQ ReSTOR® +2.5 D Multifocal IOL Model SV25T0 is based in part on the safety demonstrated by its parent Model MA60D3 and Model SA60D3.

No unanticipated serious adverse device effects were observed in any subjects implanted with Models SV25T0 or SN60WF. There were no reports of explants during this clinical study. Adverse events shown in Table 10 were reported as unrelated to the IOL.

Table 10: Cumulative and Persistent Adverse Events and SPE Rates, 5	Safety	6 Months Postoperative
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				First imp	lant	ed ey	re		Second implanted eye							
		+2.5	D Mu	tifocal	Г	P	Nonof	ocal		+2.5	D Mu	tifocal	Г	ħ	/onofc	ocal
S	(N = 155)		Γ		(N = 1	65)	(N = 155)			55)	(N = 163)			53)		
	n	%	SPE %	p-value <sup>3</sup>	n	%	SPE %	p-value <sup>a</sup>	n	%	SPE %	p-value <sup>a</sup>	n	%	SPE %	p-value <sup>a</sup>
Cumulative Adverse Events	85 45				- 37	80 80			- 38		946 946					
Cystoid macular edema	2	1.3	3.0	0.9484	0	0.0	3.0	1.0000	2	1.3	3.0	0.9484	0	0.0	3.0	1.0000
Endophthalmitis	0	0.0	0.1	1.0000	0	0.0	0.1	1.0000	0	0.0	0.1	1.0000	0	0.0	0.1	1.0000
Нуроруоп	0	0.0	0.3	1.0000	0	0.0	0.3	1.0000	0	0.0	0.3	1.0000	0	0.0	0.3	1.0000
Lens dislocated from posterior chamber	0	0.0	0.1	1.0000	0	0.0	0.1	1.0000	0	0.0	0.1	1.0000	0	0.0	0.1	1.0000
Pupillary block	0	0.0	0.1	1.0000	0	0.0	0.1	1.0000	0	0.0	0.1	1.0000	0	0.0	0.1	1.0000
Retinal detachment	0	0.0	0.3	1.0000	0	0.0	0.3	1.0000	0	0.0	0.3	1.0000	0	0.0	0.3	1.0000
Secondary surgical intervention	0	0.0	0.8	1.0000	0	0.0	0.8	1.0000	o	0.0	0.8	1.0000	3	1.8	0.8	0.1432
Persistent Adverse Events					- 24		5 5		- 35		2 2	2				
Comeal stroma edema	0	0.0	0.3	1.0000	0	0.0	0.3	1.0000	0	0.0	0.3	1.0000	0	0.0	0.3	1.0000
Cystoid macular edema	1	0.6	0.5	0.5402	0	0.0	0.5	1.0000	1	0.6	0.5	0.5402	0	0.0	0.5	1.0000
Iritis	1	0.6	0.3	0.3723	0	0.0	0.3	1.0000	1	0.6	0.3	0.3723	0	0.0	0.3	1.0000
Raised IOP requiring treatment	0	0.0	0.4	1.0000	1	0.6	0.4	0.4838	0	0.0	0.4	1.0000	1	0.6	0.4	0.4797

SPE = Safety and Performance Endpoints

<sup>a</sup> One-sided exact binomial test (alpha = .05)

## <u>Visual Disturbances</u>

A new Patient Reported Outcomes instrument (Assessment of Photic Phenomena & Lens EffectS, abbreviated APPLES) was developed and used in this clinical study. The instrument administered was not validated according to FDA's guidance document entitled "Patient-reported outcome measures: use in medical product development to support labeling claims", dated December 2009. Patient reported rates of visual disturbances are presented in Table 11 stratified by rating (None, Mild, Moderate, and Severe).

At Visit 4A (6 months), there were more reports of severe halos and starbursts in the AcrySof® IQ ReSTOR® +2.5 D Multifocal IOL group while other categories of reports of severe visual disturbance were the same or lower compared to the monofocal IOL group.

		+2.	5 D Mult	ifocal	20			Monofocal				
	N	None	Mild	Mod*	Severe	N	None	Mild	Mod*	Severe		
		%	%	%	%		%	%	%	%		
Glare	153	39.9	35.9	20.9	3.3	160	49.4	33.8	13.1	3.8		
Halos	153	37.3	30.1	22.2	10.5	160	61.9	26.9	7.5	3.8		
Starbursts	153	55.6	24.8	11.8	7.8	160	61.9	26.9	7.5	3.8		
Hazy vision	153	66.0	26.8	6.5	0.7	160	66.9	24.4	7.5	1.3		
Blurred vision	153	73.9	19.6	6.5	0.0	160	71.9	23.1	5.0	0.0		
Distortion where straight lines look tilted	153	90.8	7.2	2.0	0.0	160	93.1	5.6	0.0	1.3		
Distortion where flat lines look curved	153	95.4	2.6	2.0	0.0	160	95.0	3.1	0.6	1.3		
Double vision	153	92.8	4.6	2.0	0.7	160	95.6	2.5	0.6	1.3		
Color distortion	153	94.1	5.2	0.7	0.0	160	93.8	5.6	0.6	0.0		
Feeling sick due to distortion	153	95.4	3.9	0.7	0.0	160	91.9	6.3	1.9	0.0		

### Table 11: Visual Disturbances, Safety, 6 Months Postoperative

\*Mod = Moderate

#### Glistenings

AcrySof® IOLs had a low rate of reported glistenings: 95.5% of all 624 implanted lenses demonstrated no glistenings at 6 months. For the 4.5% that reported glistenings, none were reported to be clinically significant by the implanting surgeon.

## 2. AcrySof® NATURAL SINGLE-PIECE IOL CLINICAL STUDY (Model SB 30AL)

A clinical study was conducted on subjects receiving the monofocal AcrySof® Natural Single Piece IOL Model SB30AL compared to the monofocal AcrySof® UV Single Piece IOL Model SA30AL. Subjects were followed for a minimum of one year postoperatively and the results provided reasonable assurance of the safety and effectiveness of AcrySof® Natural Single Piece IOL Model SB30AL for the visual correction of aphakia.

### **Color Perception**

Color perception testing using the Farnsworth D-15 Panel Test was conducted on all subjects at the 120 to 180 day postoperative period. Of the 109 subjects with normal color vision implanted with a AcrySof® Natural IOL Model SB30AL in the first operative eye and examined at the 120 to 180 day postoperative visit, 107 (38.2%) passed the color perception test. Of the 102 subjects with normal color vision implanted with a AcrySof® UVIOL Model SA30AL in the first operative eye and examined at the 120 to 180 day postoperative visit, 97 (95.1%) passed the color perception test. There were no statistically significant differences between AcrySof® Natural IOL Model SA30AL and AcrySof® UVIOL Model SA30AL for the percent of subjects that passed the color perception test at the 120 to 180 day postoperative visit, 97 (95.1%) passed the color perception test. There were no statistically significant differences between AcrySof® Natural IOL Model SA30AL and AcrySof® UVIOL Model SA30AL for the percent of subjects that passed the color perception test at the 120 to 180 day postoperative visit. Therefore, the addition of the proprietary chromophore did not negatively affect color vision in patients with normal color vision.

### 3. AcrySof® ReSTOR® APODIZED DIFFRACTIVE OPTIC POSTERIOR CHAMBER IOL CLINICAL STUDIES

Multicenter clinical studies were conducted in the United States and Europe to establish the safety and effectiveness of the multifocal AcrySof® ReSTOR ® Apodized Diffractive Optic IOL (Models MA60D3 and SA60D3). An All Implanted cohort consisted of a total of 566 first-eye implanted ReSTOR® IOL (440 MA60D3 and 126 SA60D3) subjects and 194 AcrySof® Model MA60BM monofocal IOL subjects. A Best Case cohort (subjects with no clinically significant preoperative ocular pathology or postoperative macular degeneration) consisted of 391 Model MA60D3 and 109 Model SA60D3 (ReSTOR® IOL subjects and 172 Model MA60BM monofocal IOL subjects. Demographically, these studies consisted of 56.3% female and 34.7% male subjects. Stratified by race, subjects were 93.9% Caucasian, 2.6% Black, 0.9% Asian, and 2.5% designated "Other." The mean age for the total study population was 68.8 years.

#### Summary of Driving Sub-study

Night driving performance was tested using the NDS (Night Driving Simulator), developed and validated by Vision Sciences Research Corp., in bilaterally implanted subjects (23 subjects implanted with ReSTOR®IOL Model MA60D3 and 25 subjects implanted with monofocal control Model MA60BM). Night driving performance wastested to determine visibility distances for the detection and identification of road warning signs, message signs, and road hazards under various conditions (clear [normal], inclement weather [fog], and glare conditions). The simulated driving scenes using the NDS (Night Driving Simulator) were a city street at night with streetlights and a rural highway with low beam headlights.

It is important to realize that there are no absolute detection and identification distances for all targets to determine safety and efficacy. Actual visibility distances, excluding individual differences, will depend upon the target size, contrast (sign age, clean or dirty sign), background clutter (oncoming vehicle headlights, street and store lights) and vehicle headlight condition (low or high beams, clean or dirty lens). The NDS was designed to provide similar visibility distances to that of similar targets reported in the literature. One could use other targets in the real world and obtain other visibility distances; however, those distances would be relevant only for the conditions noted above, such as age and condition of the target, and would change over time. Therefore, safety and efficacy analysis can only be based on relative differences between the lenses, not absolute values. Visibility distance values could be biased to allow a very large distances or, conversely, visibility distance requirements by making the simulator targets visible at very large distances or, conversely, visibility distance values could be biased to allow a very small difference between lenses to satisfy stopping distance requirements by making the simulator targets. With this in mind, further analysis uses the actual target visibility distance examples first reported in the validation study literature for the NDS.

The ability of subjects implanted with ReSTOR®IOL Models MA60D3 and SA60D3 to detect and identify road signs and hazards at night was similar to that of subjects implanted with the monofocal control Model MA60BM under normal visibility driving conditions.

### Sign Identification

### Rural Driving Conditions

The mean visibility distances, standard deviations, and percentage differences between monofocal (Model MA60BM) subjects and ReSTOR® IOL (Model MA60D3) subjects for sign identification under normal, fog, and glare conditions in the rural scene are shown in Table 12.

Both fog and glare are seen to cause larger differences in performance between the monofocal subjects and the ReSTOR®IOL Model MA60D3 subjects than the clear night condition. However, in all instances the mean differences were less than 15%.

		Le	ens			
Identification Distance (feet)		Monofocal Control IOL Model M A60BM	ReSTOR®IOL ModelMA60D3	Difference	% Loss over Control	
Visibility Condition	Targets					
Name	Text	249 ± 57	230 ± 41	19	7.5 %	
Normai	Warning	523 ± 68	476 ± 81	47	8.9 %	
	Text	248 ± 42	215 ± 50	33	13.4 %	
Fog	Warning	512 ± 89	453 ± 88	60	11.6 %	
Clore	Text	228 ± 56	195 ± 52	33	14.1 %	
Giare	Warning	512 ± 89	448 ± 83	64	12.5 %	

# Table 12: Mean (± SD) Sign Identification Distances in Rural Scene

#### **City Driving Conditions**

The mean visibility distances, standard deviations, and percentage differences between monofocal (Model MA60BM) subjects and ReSTOR® IOL (Model MA60D3) subjects for sign identification under normal, fog, and glare conditions in the city scene are shown in Table 13.

Under glare conditions, the ability of the ReSTOR @IOL Model M A60D3 subjects to identify the text sign was reduced on average by 28%; however, there was only a small difference under these conditions for the warning sign.

# Table 13: Sign Identification Distances in City Scene

52 3000 AV45	0.000000	Le	ns		
Identification Distance (feet)		Monofocal Control IOL Model M A60BM	ReSTOR®IOL Model MA60D3	Difference	% Loss Over Control
Visibility Condition	Targets	2			
	Text	160 ± 30	143 ± 31	17	10.8 %
Normal	Warning	211 ± 26	201 ± 25	10	4.7 %
· · · · · · · · · · · · · · · · · · ·	Text	159 ± 24	138 ± 34	21	13.2 %
Fog	Warning	208 ± 23	184 ± 31	24	11.7 %
·	Text	142 ± 33	102 ± 46	40	28.%
Glare	Warning	194 ± 26	170 ± 28	24	12.5 %

# Detecting Hazards

Rural Conditions

The mean visibility distances, standard deviations, and percentage differences between monofocal (Model MA60BM) subjects and ReSTOR® IOL (Model MA60D3) subjects for hazard detection under normal, fog, and glare conditions in the rural scene are shown in Table 14. In rural conditions, all differences for detecting hazards were less than 20%.

Table 14: Hazard Detection Distances in Rural Scene

Datadian Distance	Ler	IS		% Loss Over Control	
(feet)	Mono focal Control IOL Model MA60BM	ReSTOR®IOL Model MA60D3	Difference		
Visibility Condition					
Normal	511 ± 80	474 ± 87	37	7.2 %	
Fog	507 ± 92	465 ± 101	42	8.5 %	
Glare	480 ± 98	386 ± 150	94	19.7 %	

# **City Conditions**

The mean hazard detection, standard deviations, and percentage differences for control (Model MA60BM) subjects and ReSTOR®IOL (Model MA60D3) subjects for hazard detection under normal, fog, and glare conditions in the city scene are shown in Table 15. For city conditions, in all instances the mean differences were less than 15%.

# Table 15: Hazard Detection Distances in City Scene

Detection Distance (feet)	Lei	ns		
	Mono focal Control I OL Model MA60BM	ReSTOR®IOL Model MA60D3	Difference	% Loss Over Control
Visibility Condition				
Normal	200 ± 52	183 ± 38	17	8.5 %
Fog	229 ± 66	211 ± 65	18	7.9 %
Glare	190 ± 67	166 ± 48	24	12.6 %

### **Retinal Detail**

No difficulties in retinal treatment were encountered by any investigator in the study. However, one investigator had 20 reports of loss of retinal detail (i.e., the fundus appeared more anterior).

# Adverse Events

The incidences of cumulative adverse events for the ReSTOR® IOL as compared to the FDA historical grid rates are provided in Table 16. A single occurrence of retinal detachment/repair, single occurrence of pupillary block, and surgical reinterventions exceeded the FDA Grid rate. No occurrences of persistent adverse events (adverse events in the FDA grid that are observed at the 12 month postoperative visit) were observed in any patients implanted with the ReSTOR®IOL.

	ReST MA60D3	TOR® 3 (N=440)	ReSTOR® SA60D3 (N=126)		FDA Grid rate*	
	N	%	N	%	%	
Cumulative Adverse Events			5			
Endophthalmitis	0	0.0	0	0.0	0.1	
Macular Edema	12	2.7	1	0.8	3.0	
Retinal Detachment/Repair	0	0.0	1	0.8	0.3	
Hyphema	0	0.0	0	0.0	2.2	
P upillary block	1	0.2	0	0.0	0.1	
Lens Dislocation	0	0.0	0	0.0	0.1	
Surgical reintervention	10	2.3	2	1.6	0.8	
IOL replacement for biometry error	2	0.5	0	0.0	NA	
IOL replacement for incorrect power/ operating room error	2	0.5	0	0.0	NA	
IOL replacement for visual disturbance	1	0.2	0	0.0	NA	
IOL replacement for decentered IOL due to Traum a	1	0.2	0	0.0	NA	
IOL replacement due to patient dissatisfaction	0	0.0	1	0.8	NA	
Laser treatment	3	0.7	1	0.8	NA	
Fibrin removal	1	0.2	0	0.0	NA	
Persistent Adverse Events:			2		1	
Macular E dema	0	0.0	0	0.0	0.5	
Raised IOP Requiring Treatment	0	0.0	0	0.0	0.4	
Com eal Edem a	0	0.0	0	0.0	0.3	
Iritis	0	0.0	0	0.0	0.3	

# Table 16: ReSTOR® IOL versus FDA Historical Grid, First Eye – Safety

\*FD A draft guidance on Monofocal Intraocular Lenses, Annex B (October 14, 1999)

### **Visual Disturbances**

With the exception of blurred near vision and problems with color perception, the monofocal control patients had a lower rate of severe observations than the ReSTOR® IOL patients (Table 17). Of the 440 subjects implanted with ReSTOR® IOL Model MA60D3 and 126 subjects implanted with Model SA60D3, one subject implanted with ReSTOR®IOL Model MA60D3 required lens explantation due to visual disturbances.

Marial Disturbance	ReSTOR® Model MA60D3		ReST Model S	OR® A60D3	Monofocal Control		
visual Distumance	% Moderate	% Severe	% Moderate	% Severe	% Moderate	% Severe	
Glare/Flare	20.1	4.9	23.2	4.3	7.1	1.9	
Problems with Night Vision	8.5	4.1	10.1	2.9	3.8	1.9	
Halos	18.0	4.4	23.2	7.2	1.9	1.3	
Distorted Near Vision	0.8	0.8	0.0	0.0	0.6	0.0	
Distorted Far Vision	1.0	0.3	0.0	0.0	0.6	0.0	
Blurred Near Vision	5.9	0.8	7.2	0.0	12.8	3.8	
Blurred Far Vision	5.9	1.0	5.8	0.0	3.2	0.6	
Double Vision in both eyes	1.5	0.8	1.4	0.0	1.3	0.0	
Problems with Color Perception	0.5	0.0	0.0	0.0	0.0	0.0	

### Table 17: Visual Disturbances, 6 Months Postoperative (Following second eye implantation)

### 4. AcrySof® IQ ReSTOR® +3.0 D MULTIFOCAL TORIC INTRAOCULAR LENSES (IOLS)

## Summary of Clinical Study

The clinical study was a prospective, nonrandomized, unmasked, parallel-group study was designed for bilateral implantation of a minimum of 510 (m aximum of 600 subjects) subjects in total, with a minimum of 340 subjects implanted with the investigational AcrySof® IQ ReSTOR® +3.0 D Multifocal Toric IOL Models SND1T3-SND1T6 (referred to as the ReSTOR® Toric +3.0 D IOL below), and a minimum of 170 subjects implanted with the FDA approved AcrySof® ReSTOR® (+4.0 D Add) Multifocal IOL Model SA60D3 (referred to as the ReSTOR® +4.0 D IOL below), at up to 25 investigational sites in the United States. Assuming a 10% drop-out rate for a 12 month follow-up in the all implanted data set, approximately 459 subjects were intended to be evaluated at the 12 month visit, approximately 306 investigational lens subjects and 153 control lens subjects. The investigational ReSTOR® Toric +3.0 D IOL was designed with a near reading distance of 40 cm and the control ReSTOR® +4.0 D IOL was designed with a near reading distance of 40 cm and the control ReSTOR® +4.0 D IOL was designed with a near reading distance of 40 cm and the control ReSTOR® +4.0 D IOL was designed with a near reading distance of 40 cm and the control ReSTOR® +4.0 D IOL was designed with a near reading distance of 40 cm and the control ReSTOR® +4.0 D IOL was designed with a near reading distance of 40 cm and the control ReSTOR® +4.0 D IOL was designed with a near reading distance of 30 cm. The parameters impacted by the near add power difference were intermediate visual acuity and binocular defocus, in favor of the ReSTOR® Toric +3.0 D IOL. No difference was observed in the rate of severe visual disturbances/distortions between the ReSTOR® Toric +3.0 D IOL and the ReSTOR® +4.0 D IOL, atthough this would be expected to favor the ReSTOR® Toric +3.0 D IOL based on the add power difference.

Inclusion of the ReSTOR®+4.0 D IOL as an active control in the clinical study was necessary to evaluate the safety and the effectiveness of the investigational lens as a newtoric multifocal IOL with similar attributes to this established multifocal lens. The trial objective was to demonstrate that the efficacy and safety profile, demonstrated with the control ReSTOR®+4.0 D IOL in non-astigmatic subjects was reasonably retained with the investigational ReSTOR®Toric+3.0 D IOL in subjects with corneal astigmatism.

All of the subjects in the ReSTOR® +4.0 D IOL group were required to have  $\leq 0.74$  D of preoperative keratometric astigmatism in both eyes as measured only by the IOLM aster. Subjects with preoperative astigmatism of  $\geq 0.75$  D, as measured only by the IOLM aster, in both operative eyes and with 0.75 D to 2.82 D of predicted cross cylinder in both operative eyes, based on the study specific web-based AcrySof® IQ ReSTOR® +3.0 D Multifocal Toric IOL Clinical Calculator, were required to be implanted with one of the ReSTOR® Toric +3.0 D IOL Models SND1T3-SND1T6. All corneal incisions were placed temporally and a surgically induced astigmatism (SIA) input value of 0.0 diopters was used in the study specific web based AcrySof® IQ ReSTOR® +3.0 D Multifocal Toric IOL Calculator.

In the investigational ReSTOR® Toric + 3.0 D IOL group, a minimum of 240 subjects needed to be implanted with Model SND1T3 or SND1T4 in the first operative eye (≤ 2.0 D astigmatism) and a minimum of 100 subjects needed to be implanted with Model SND1T5 or SND1T6 in the first operative eye (> 2.0 D astigmatism).

All eyes with successful IOL implantation in at least one eye were considered evaluable for the All Implanted analyses. All eyes successfully implanted that had at least one postoperative visit and had no preoperative ocular pathology or macular degeneration at any time were evaluable for Best Case analyses. The Best Case data set was the primary data set of analysis for the contrast sensitivity and binocular defocus. All eyes with attempted IOL implantation (successful or aborted after contract with the eye) were considered evaluable for the safety analyses.

For subjects with IOL replacement due to visual disturbance, performance testing (including UCDVA, BCDVA, manifest refraction, slit-lamp examination, dilated fundus examination and subject responses to the patient reported outcome questionnaires) results collected prior to the secondary surgical intervention were carried forward to the final analysis.

# **Clinical Study Results**

## Subject Population

A total of 574 subjects were bilaterally implanted in this clinical study with 386 subjects receiving the ReSTOR® Toric +3.0 D IOL and 188 subjects receiving the control ReSTOR @+4.0 D IOL.

The study consisted of 65.5% females and 34.5% males. Stratifying by race, there were 93.7% White, 4.5% Black or African American, 0.9% Asian and 0.9% designated "Other". Ethnicity of the study population designated 1.6% as Hispanic. A Best Case cohort (no clinically significant preoperative ocular pathology or postoperative macular degeneration) consisted of 365 ReSTOR® Toric +3.0 D IOL subjects and 175 ReSTOR®+4.0 D IOL control subjects. The mean age for the study population was 67 ± 9 years. The length of subject follow-up was 12 months.

### Monocular Visual Acuity

ReSTOR® Toric +3.0 D IOL met the clinical performance target (non-inferiority margin of 0.10 logMAR) for Uncorrected Distance Visual Acuity. There were no clinically relevant differences in the mean Best Corrected Distance Visual Acuity for subjects implanted with either the ReSTOR® Toric +3.0 D IOL compared with subjects implanted with the control ReSTOR®+4.0 DIOL.

The following is a summary of monocular visual acuity (VA) results for subjects who completed the Form 5 (1 year after second eye implantation) visit. The data are presented in Tables 18-19 below.

### Table 18: Comparison of Monocular Uncorrected Distance Visual Acuity **Using Least Square Estimates** All Implanted, 1 Year Postoperative

		ReSTOR® Toric +3.0 D (N=386)	ReSTOR® +4.0 D (N=186)	Difference (95%UCL)
	N	373	180	
First Implanted Eye	Mean	0.126	0.125	0.001 (0.030)
	SE	0.013	0.015	5 (2) 
	N	371	180	
Second Implanted Eye	Mean	0.113	0.102	0.011 (0.038)
	SE	0.011	0.013	

ReSTOR® Toric +3.0 D IOL = AcrySof®IQ ReSTOR ® +3.0 D

Multifocal Lens Models SND1T3/SND1T4/SND1T5/SND1T6

ReSTOR® +4.0 D IOL = AcrySof® ReSTOR @ Multifocal Lens (+4.0 D Add) Model SA60D 3

Difference = ReSTOR® Toric +3.0 D IOL - ReSTOR® +4.0 D IOL

Estimates were based on the repeated measure analysis of covariance

UCL = 95% Upper confidence limit; SE = Standard error

"(N= )" in column header is num ber in the treatment group. Subjects who discontinued before Visit 5 are excluded from this analysis. Numbers with data are indicated in the table body.

ReSTOR® Toric +3.0 D IOL met the clinical performance target (non-inferiority margin of 0.10 logMAR) for Uncorrected Near Visual Acuity at fixed distance. No clinically relevant differences in Distance Corrected Near Visual Acuity at fixed distance for the ReSTOR® Toric+3.0 D IOL and the control ReSTOR®+4.0 D IOL were observed.

### Table 19: Comparison of Monocular Uncorrected Near Visual Acuity At Fixed D istance Using Least Square Estimates All Implanted, 1 Year Postoperative

		ReSTOR® Toric +3.0 D (N =386)	ReSTOR® +4.0 D (N=186)	Difference (95%UCL)
First	N	373	180	1
Implanted	Mean	0.193	0.236	-0.044 (-0.017)
Еуе	SE	0.015	0.017	
Second	N	371	180	
Implanted Eye	Mean	0.181	0.234	-0.052 (-0.026)
	SE	0.013	0.015	

ReSTOR® Toric +3.0 D IOL = AcrySof®IQ ReSTOR ® +3.0 D Multifocal Lens Models SND1T3/SND1T4/SND1T5/ SND1T6

ReSTOR® +4.0 D IOL = AcrySof® ReSTOR @ Multifocal Lens (+4.0 D Add) Model SA60D 3

Difference = ReSTOR® Toric +3.0 D IOL - ReSTOR® +4.0 D IOL

Estimates were based on the repeated measure analysis of covariance

UCL = 95% Upper confidence limit; SE = Standard error

"(N= )" in column header is number in the treatment group. Subjects who discontinued before Visit 5 are excluded from this analysis. Numbers with data are indicated in the table body.

No clinically relevant differences in Uncorrected Near Visual Acuity at best distance were observed for either the ReSTOR® Toric +3.0 D IOL or the control ReSTOR® +4.0 D IOL. Additionally, there were no clinically relevant differences in Distance Corrected Near Visual Acuity at best distance observed for the ReSTOR® Toric +3.0 D IOL or the control ReSTOR®+4.0 D IOLs under photopic or mesopic conditions.

The Best Corrected Near Visual Acuity (BCNVA) for subjects implanted with the ReSTOR® Toric + 3.0 D IOL compared favorably to the BCNVA for subjects implanted with the or the control ReSTOR® + 4.0 D IOL.

### Binocular Visual Acuity

There were no clinically relevant differences in mean Best Corrected Distance Visual Acuity (BCDVA) for subjects implanted with the ReSTOR® Toric +3.0 D IOL compared with subjects implanted with the control ReSTOR® +4.0 D IOL. The observed percentage of subjects achieving a 2 or greater line improvement in BCDVA was similar among the two lens models (ReSTOR® Toric +3.0 D and the control ReSTOR® +4.0 D IOL).

The following is a summary of binocular visual acuity (VA) results for subjects who completed the Form 5 (1 year after second eye implantation) visit. The data are presented in Tables 20-24 below.

### Table 20: Overall Comparison of ReSTOR® Toric +3.0 D and ReSTOR® +4.0 D IOLs Mean Binocular Distance-Corrected Visual Acuity (logMAR), All Implanted, 1 Year Postoperative

Model	Near VA@ Best Distance	Intermediate VA @ 50 cm	Intermediate VA @60 cm	Intermediate VA @ 70 cm	Distance VA
ReSTOR® +3.0 D Toric	0.08 (20/25)	0.08 (20/25)	0.14 (20/25)	0.20 (20/32)	-0.04 (20/20)
ReSTOR® +4.0 D	0.09 (20/25)	0.28 (20/40)	0.35 (20/50)	0.36 (20/50)	-0.04 (20/20)

ReSTOR®Toric+3.0D = AcrySof®IQReSTOR®+3.0D Multifocal Toric

IOL Models SND1T3/SND1T4/SND1T5/SND1T6

ReSTOR®+4.0 D = AcrySof® ReSTOR ® Multifocal IOL (+4.0 D Add) Model SA60D3

			20/20 (J1) or better	20/25 (J2) or better	20/32 (J4) or better	20/40 (J5) or better	20/50 (J6) or better	20/63 (J8) or better	Worse than 20/63 (J8)
		N	%	%	%	%	%	%	%
Uncorrected	ReSTOR® Toric +3.0 D	371	35.6	69.5	89.5	97.8	98.7	99.5	0.5
(Best Distance*)	ReSTOR®+4.0 D	180	25.6	67.8	88.9	96.1	98.3	99.4	0.6
Uncorrected	ReSTOR® Toric +3.0 D	371	42.3	70.9	89.5	96.2	98.1	99.7	0.3
(Standard Distance**)	ReSTOR®+4.0 D	180	23.9	56.1	84.4	92.2	97.8	98.9	1.1
Distance	ReSTOR® Toric +3.0 D	371	37.5	73.9	94.6	97.8	99.2	99.5	0.5
(Best Distance*)	ReSTOR®+4.0 D	180	35.0	72.2	93.9	95.6	99.4	100.0	0.0
Distance	ReSTOR® Toric +3.0 D	371	44.5	80.6	94.1	98.1	98.9	99.5	0.5
Corrected (Standard Distance**)	ReSTOR® +4.0 D	180	31.1	65.6	88.9	97.2	98.3	98.9	গণ
Best Corrected (Standard Distance**)	ReSTOR® Toric +3.0 D	371	58.2	86.0	97.3	99.2	99.5	100.0	0.0
	ReSTOR® +4.0 D	180	41.7	81.1	92.8	98.3	99.4	100.0	0.0

### Table 21: Cumulative Binocular Photopic Near Visual Acuity of ReSTOR® Toric +3.0 D and ReSTOR® +4.0 D IOLs by Lens Model, All Implanted, 1 Year Postoperative

ReSTOR® Toric +3.0 D = AcrySof® IQ ReSTOR® +3.0 D Multifocal Toric

IOL Models SND1T3/SND1T4/SND1T5/ SND1T6

ReSTOR® +4.0 D = AcrySot® ReSTOR® Multifocal IOL (+4.0 D Add) Model SA60D3

\*Best distance: The distance selected by the subject as the distance of best near vision

\*\*Standard distance: 33 cm for the ReSTOR®+4.0 D IOL and 40 cm for ReSTOR®+3.0 D Toric IOL

Table 22: Cumulative Binocular Photopic Distance Visual Acuity of
ReSTOR® Toric +3.0 D and ReSTOR® +4.0 D IOLs by Lens Model,
All Implanted, 1 Year Postoperative

			20/20 or better	20/25 or better	20/32 or better	20/40 or better	20/50 or better	20/63 or better	Worse than 20/63	
		N	%	% %	%	%	%	%	%	%
Uncorrected	ReSTOR® Toric +3.0 D	371	65.0	88.7	96.0	98.9	99.2	99.5	0.5	
Unconacta	ReSTOR®+4.0 D	180	68.9	91.7	97.8	99.4	99.4	100.0	0.0	
Best Corrected	ReSTOR® Toric +3.0 D	371	90.3	97.3	99.2	99.7	100.0	100.0	0.0	
	ReSTOR®+4.0 D	180	96.1	97.8	99.4	99.4	100.0	100.0	0.0	

ReSTOR®Toric+3.0D = AcrySof®IQ ReSTOR®+3.0DMultifocal ToricIOLModelsSND1T3/SND1T4/SND1T5/SND1T6 ReSTOR®+4.0D = AcrySof® ReSTOR®Multifocal IOL (+4.0D Add)Model SA60D3

Clinically relevant differences favoring the ReSTOR® Toric +3.0 D IOL were observed for mean Uncorrected Intermediate Visual Acuity and for Distance Corrected Intermediate Visual Acuity at all testing distances (50 cm, 60 cm, and 70 cm).

### Table 23: Intermediate Photopic Visual Acuity for ReSTOR® +3.0 D Toric and ReSTOR® +4.0 D IOLs by Lens Model, All Implanted, 1 Year Postoperative

			Pe	ter	
		N	50 cm	60 cm	70 cm
Landersteine	ReSTOR® Toric +3.0 D	371	93.3	86.3	79.8
Oncorrected	ReSTOR® +4.0 D	180	63.3	rcent 20/40 or be 60 cm 86.3 47.2 88.4 37 8	50.6
Distance	ReSTOR® Toric +3.0 D	371	96.5	88.4	79.0
Corrected	ReSTOR® +4.0 D	180	66.7	37.8	38.9

ReSTOR® Toric +3.0 D = AcrySof® IQ ReSTOR® +3.0 D Multifocal Toric

IOL Models SND1T3/SND1T4/SND1T5/SND1T6

ReSTOR® +4.0 D = AcrySof® ReSTOR® Multifocal IOL (+4.0 D Add) Model SA60D3

### Table 24: Mean LogMAR Binocular Distance Corrected Intermediate Visual Acuity, for ReSTOR® Toric +3.0 D and ReSTOR® +4.0 D IOLs, All Implanted, 1 Year Postoperative

Intermediate VA	ReSTOR® Toric +3.0 D	ReSTOR® +4.0 D
50 cm	0.08	0.28
60 cm	0.14	0.35
70 cm	0.20	0.36

ReSTOR® Toric +3.0 D = AcrySof® IQ ReSTOR® +3.0 D Multifocal Toric

IOL Models SND1T3/SND1T4/SND1T5/SND1T6

ReSTOR® +4.0 D = AcrySof® ReSTOR® Multifocal IOL (+4.0 D Add) Model SA60D3

### Binocular Defocus Curves

The mean binocular defocus curves obtained at 6 months for the ReSTOR® Toric +3.0 D IOL and the ReSTOR® +4.0 D IOL display two peaks that demonstrate their multifocal performance, one at the zero baseline position, which corresponds to optical infinity, and one near; at -2.5 D for the ReSTOR® Toric +3.0 D IOL corresponding to the 40 cm near focal point, and at -3.0 D for the ReSTOR® to IOL corresponding to the 33 cm near focal point of the lens (Figure 5). The ReSTOR® Toric +3.0 D IOL provided mean range of 20/40 or better vision (depth of focus) from approximately -3.75 D to 0.00 D, corresponding to a range of distances from approximately 26 cm to infinity.





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## **Contrast Sensitivity**

Binocular best corrected distance contrast sensitivity was performed using a sine wave grating acuity chart (VectorVision CSV1000E) at the 4-6 month exam under four conditions photopic without glare, photopic with glare, mesopic without glare, and mesopic with glare.

Descriptive statistics including mean contrast scores and standard deviations (SD) are provided for the ReSTOR® Toric +3.0 DIOL and for the ReSTOR @+4.0 DIOL groups under each photopic lighting condition and spatial frequency (Table 25) and each mesopic lighting condition and spatial frequency (Table 26). The number and percent of subjects unable to see at least one grating are shown in the table in the "Number Scoring (-1)" rows. As per ISO 11979-9:2006, these analyses were performed using data from the best case data set (defined as all eyes successfully implanted that had at least 1 postoperative visit and had no preoperative ocular pathology or macular degeneration at any time).

		Photopic w	ithout glare	Photopic	with glare
		ReSTOR® Toric +3.0 D	ReSTOR® +4.0 D	ReSTOR® Toric +3.0 D	ReSTOR® +4.0 D
3.0 CPD	n	360	173	360	173
	Number scoring (-1)	0 (0.0%)	0 (0.0%)	2 (0.6%)	1 (0.6%)
	Mean (SD)	1.68 (0.22)	1.71 (0.23)	1.59 (0.27)	1.62 (0.28)
	(Min, Max)	(1.18, 2.08)	(0.70, 2.08)	(0.40, 2.08)	(0.40, 2.08)
	95% CI	(1.65, 1.70)	(1.67, 1.74)	(1.56, 1.61)	(1.58, 1.66)
6.0 CPD	ln l	360	173	360	173
	 Number scoring (-1)	1 (0.3%)	0 (0.0%)	24 (6.7%)	6 (3.5%)
	Mean (SD)	1.78 (0.24)	1.81 (0.23)	1.61 (0.39)	1.66 (0.36)
	(Min, Max)	(0.61, 2.29)	(0.90, 2.29)	(0.61, 2.29)	(0.61, 2.29)
	95% CI	(1.76, 1.81)	(1.78, 1.85)	(1.57, 1.65)	(1.61, 1.71)
12.0 CPD	In I	360	173	360	173
	Number scoring (-1)	5 (1.4%)	3 (1.7%)	18 (5.0%)	7 (4.0%)
	Mean (SD)	1.38 (0.35)	1.37 (0.32)	1.25 (0.41)	1.24 (0.38)
	(Min, Max)	(0.31, 2.00)	(0.31, 2.00)	(0.31, 2.00)	(0.31, 2.00)
	95% CI	(1.34, 1.42)	(1.32, 1.42)	(1.21, 1.29)	(1.18, 1.30)
18.0 CPD	In 1	360	173	360	173
	Number scoring (-1)	4 (1.1%)	1 (0.6%)	8 (2.2%)	2 (1.2%)
-	Mean (SD)	0.87 (0.31)	0.88 (0.30)	0.84 (0.33)	0.81 (0.32)
	(Min, Max)	(-0.13, 1.56)	(-0.13, 1.56)	(-0.13, 1.56)	(-0.13, 1.56)
	95% CI	(0.84, 0.90)	(0.83, 0.92)	(0.80, 0.87)	(0.77, 0.86)

### Table 25: Descriptive Statistics for Binocular Photopic Contrast Sensitivity at 6 Months Postoperative (Best Case Population)

ReSTOR® Toric +3.0 D = AcrySot® IQ ReSTOR®+3.0 D Multifocal Toric IOL Models SND1T3/SND1T4/ SND1T5/SND1T6

ReSTOR®+4.0 D = AcrySof® ReSTOR® Multifocal IOL (+4.0 D Add) Model SA60D3

		Mesopic without glare		Mesopic with glare		
	1	ReSTOR® Toric +3.0 D	ReSTOR® +4.0 D	ReSTOR® Toric +3.0 D	ReSTOR® +4.0 D	
1.5 CPD	n	359	172	359	172	
	Number scoring (-1)	5 (1.4%)	2 (1.2%)	7 (1.9%)	3 (1.7%)	
	Mean (SD)	1.57 (0.26)	1.55 (0.25)	1.51 (0.29)	1.50 (0.28)	
	(Min, Max)	(0.30, 1.97)	(0.30, 1.97)	(0.30, 1.97)	(0.30, 1.97)	
	95% CI	(1.54, 1.59)	(1.51, 1.59)	(1.48, 1.54)	(1.46, 1.55)	
3.0 CPD	n	360	172	360	172	
	Number scoring (-1)	0 (0.0%)	0 (0.0%)	3 (0.8%)	0 (0.0%)	
	Mean (SD)	1.57 (0.25)	1.57 (0.24)	1.55 (0.28)	1.55 (0.26)	
	(Min, Max)	(0.70, 2.08)	(0.85, 2.00)	(0.40, 2.08)	(0.70, 2.08)	
	95% CI	(1.54, 1.59)	(1.53, 1.61)	(1.52, 1.58)	(1.52, 1.59)	
6.0 CPD	n	360	172	360	172	
	Number scoring (-1)	9 (2.5%)	5 (2.9%)	41 (11.4%)	19 (11.0%)	
	Mean (SD)	1.51 (0.31)	1.50 (0.31)	1.41 (0.37)	1.40 (0.37)	
	(Min, Max)	(0.61, 2.29)	(0.61, 2.29)	(0.61, 2.29)	(0.61, 2.21)	
	95% CI	(1.47, 1.54)	(1.46, 1.55)	(1.37, 1.45)	(1.35, 1.46)	
12.0 CPD	n	360	172	360	172	
	Number scoring (-1)	52 (14.4%)	31 (18.0%)	94 (26.1%)	50 (29.1%)	
	Mean (SD)	0.92 (0.39)	0.89 (0.40)	0.81 (0.40)	0.80 (0.41)	
	(Min, Max)	(0.31, 2.00)	(0.31, 2.00)	(0.31, 2.00)	(0.31, 2.00)	
	95% Cl	(0.88, 0.96)	(0.83, 0.95)	(0.76, 0.85)	(0.74, 0.87)	

### Table 26: Descriptive Statistics for Binocular Mesopic Contrast Sensitivity at 6 Months Postoperative (Best Case Population)

ReSTOR® Toric + 3.0 D = AcrySof® IQ ReSTOR® + 3.0 D Multifocal Toric I OL Models SND1T3/SND1T4/ SND1T5/ SND1T6

ReSTOR®+4.0 D = AcrySof® ReSTOR® Multifocal IOL (+4.0 D Add) Model SA60D3

# Orientation of Lens Axis

Lens axis misalignment, the orientation of the lens axis at the operative visit compared to the intended lens axis orientation (calculated using preoperative biometry measurements and the study specific web-based Alcon AcrySof® IQ ReSTOR® +3.0 D Multifocal Toric IOL Clinical Calculator) was assessed and accuracy of lens placement was demonstrated with the mean absolute difference between intended axis orientation and achieved axis orientation at surgery being 5.0° (S.D. 6.1) for the ReSTOR® Toric +3.0 D IOLs in the first operative eyes (Table 27). Nine subjects (seven first eyes and two second eyes) had actual misalignments of 20 degrees or more on the day of surgery, of whom three had SSIs (repositioning surgeries) as a result of incorrect axis placement due to anatomical and/or surgical factors (refer to Precautions 4 and 10).

### Table 27: Absolute Difference B etween Intended Axis of Placement and Achieved Axis Placement (Degrees) at the Operative Visit (All Implanted Set)

	First Implanted Eye	Second Implanted Eye
	(n = 363)	(n = 366)
Mean (SD)	5.0 (6.1)	4.7 (4.0)
(Min, Max)	(0, 87)	(0,36)
95% CI	(4.3, 5.6)	(4.2, 5.1)

The results for lens axis orientation at all postoperative visits were compared to those at surgery to determine lens axis rotation. The difference between the achieved lens axis orientation at month 12 and the achieved axis placement at surgery was  $2.7^{\circ} \pm 5.8$  in the first operative eyes and  $2.2^{\circ} \pm 2.7$  in the second operative eyes (Table 28). Lens axis rotation ranged from 1.4 to 2.7 degrees at all postoperative visits. Eight subjects had lens axis rotation of twenty degrees or more at month 12 month, two of whom had incorrect lens axis orientation measurements and three of whom underwent lens repositioning and have improved outcomes with the lens implanted (post repositioning rotation was less than 6 degrees). All eight subjects had improved visual performance at month 12.

Table 28: Descripti	e Statistics for the Absolute Difference Between Lens Axis Orientation at the
Post-operat	ive Visit and Achieved Axis Placement (Degrees) at the Operative Visit
10.01997.0240 <del>.0</del> 989.0340	(All Implanted Set)

		Absolute Rotation	
		First Implanted Eye	Second Implanted Eye
Day 1	n	376	375
	Mean (SD)	1.4 (1.8)	1.5 (1.7)
	(Min, Max)	(0, 18)	(0,14)
	95% Cl	(1.2, 1.6)	(1.3, 1.6)
1 week	n	375	366
	Mean (SD)	1.8 (2.3)	2.0 (2.7)
	(Min, Max)	(0, 23)	(0, 30)
	95% Cl	(1.6, 2.0)	(1.7, 2.2)
1 month	n	367	368
	Mean (SD)	2.2 (5.1)	2.1 (2.7)
	(Min, Max)	(0, 85)	(0,24)
	95% Cl	(1.6, 2.7)	(1.8, 2.4)
6 months	n	363	364
	Mean (SD)	2.3 (5.2)	2.3 (3.0)
	(Min, Max)	(0, 85)	(0, 27)
	95% CI	(1.7, 2.8)	(2.0, 2.6)
12 months	n	356	357
	Mean (SD)	2.7 (5.8)	2.2 (2.7)
-	(Min, Max)	(0, 84)	(0, 24)
	95% CI	(2.1, 3.3)	(1.9, 2.5)

For subjects with missing Operative Visit axis placement data, Day1 (Visit 1) data were used as baseline

Furthermore, the rotational stability of the ReSTOR® Toric +3.0 D IOL was maintained between 2 consecutive visits at least 3 months apart (between 1 month and 6 months). As recommended by the 2010 ANSI standard for toric intraocular lenses, the data demonstrate that at least 90% of ReSTOR® Toric +3.0 D IOL subjects achieved a rotational stability of 5 degrees or less between 2 consecutive visits, at least 3 months apart (Table 29).

### Table 29: Number and Percentage of Subjects by Lens Axis Rotation Between 1 Month and 6 Months (All Implanted)

		ReSTOR® Toric +3.0 D	
		n	(%)
First Implanted Eye	Total	359	
242	Lens Movement≤ 5 degrees	338	(94.2)
	Lens Movement >5 degrees	21	(5.8)
	50.992.04.012	5,626.0	5.00 
Second Implanted Eye	Total	361	
	Lens Movement≦ 5 degrees	339	(93.9)
	Lens Movement >5 degrees	22	(61)

ReSTOR®Toric+3.0D = AcrySof®IQReSTOR®+3.0DMultifocal ToricIOLModelsSND1T3/SND1T4/SND1T5/SND1T6 Subjects with missing observations at either 1 month or 6 months were excluded

### **REDUCTION OF CYLINDER**

The ReSTOR® Toric +3.0 DIOLs are effective in the reduction of corneal astigmatism in the range of 0.75D to 2.82D. As demonstrated in Table 30, the percent reduction in cylinder with respect to target cylinder was calculated and descriptive statistics were computed at each postoperative visit. Target cylinder was defined as the amount of anticipated residual astigmatism as calculated by the AcrySof®IQ ReSTOR®+3.0 D Multifocal ToricIOL Clinical Calculator.

### Table 30: Number and Percentage of Subjects With Reduction of Cylinder Within the Target Cylinder at 1 year for ReSTOR® Toric +3.0 D (All Implanted)

	First Implanted Eye (N = 373)		Second Implanted Eye (N = 371)	
	្ពា	(%)	n	(%)
Within 0.5D	278	(74.5)	295	(79.5)
Within 1.0D	351	(94.1)	362	(97.6)
> 1.0D	22	(5.9)	9	(2.4)

# SAFETY

The incidences of cumulative adverse events for the ReSTOR® Toric +3.0 D IOL and the control ReSTOR®4.0 D IOL as compared to the FD A historical grid rates are provided in Table 31. If the same event occurred multiple times in an eye, only the first occurrence is counted in the table below. The rate of secondary surgical interventions (SSIs) exceeded the FDA grid rate in the ReSTOR® Toric +3.0 D IOL group for the first and second eyes. The rate of secondary surgical interventions exceeded the FDA grid rate for the control ReSTOR® +4.0 D IOL group in the second eyes only. However, as shown in Table 18, a majority of the secondary surgical interventions were unrelated to the IOL and were due to other ocular pathology. Table 17 includes the number of eyes that under vent a SSI while Table 32 is the number of actual SSIs (i.e., a single eye could have had more than 1 SSI) that occurred during the study. Details of the discrepancies in numbers are discussed in the footnotes of Table 32. There was a single occurrence of a persistent adverse event (adverse events in the FDA grid that are observed at the 12 month postoperative visit) observed in one subject implanted with the ReSTOR® Toric +3.0 D IOL. The observed persistent adverse event rates in each eye did not exceed the Safety and Performance Endpoints (SPE) rates.
		Fir	stimpl	anted	eye	ļ,	Į	Seco	ond imp	olante	d eye	
	ReSTOR® Toric +3.0 D (N = 386)		F	teSTOR +4.0 D (N = 188	.® I)	ReS	TOR® 7 +3.0 D (N = 383	Foric I)	ReSTOR Toric +4.0 D (N =188)			
	N	%	SPE %	N	%	SPE %	N	%	SPE %	N	%	SPE %
Serious Adverse Events			s				į.		8		8 - 3	
Cystoid macular edema	1	(0.3)	3.0	0	(0.0)	3.0	3	(0.8)	3.0	1	(0.5)	3.0
Endophthalmitis	0	(0.0)	0.1	0	(0.0)	0.1	0	(0.0)	0.1	0	(0.0)	0.1
Hypopyon	0	(0.0)	0.3	0	(0.0)	0.3	0	(0.0)	0.3	0	(0.0)	0.3
Lens dislocated from posterior chamber	0	(0.0)	0.1	0	(0.0)	0.1	0	(0.0)	0.1	0	(0.0)	0.1
Pupillary block	0	(0.0)	0.1	0	(0.0)	0.1	0	(0.0)	0.1	0	(0.0)	0.1
Retinal detachment	1	(0.3)	0.3	0	(0.0)	0.3	2	(0.5)	0.3	1	(0.5)	0.3
Secondary surgical intervention	12	(3.1)	0.8	4	(2.1)	0.8	11	(2.9)	0.8	6	(3.2)	0.8
Persistent Serious Adverse Events		0 0	S				17				°°	
Corneal edema	0	(0.0)	0.3	0	(0.0)	0.3	0	(0.0)	0.3	0	(0.0)	0.3
Cystoid macular edema	1	(0.3)	0.5	0	(0.0)	0.5	1	(0.3)	0.5	0	(0.0)	0.5
Iritis	0	(0.0)	0.3	0	(0.0)	0.3	0	(0.0)	0.3	0	(0.0)	0.3
Raised IOP requiring treatment	0	(0.0)	0.4	0	(0.0)	0.4	0	(0.0)	0.4	0	(0.0)	0.4

# Table 31: Serious and Persistent Adverse Events and SPE Rates (Safety)

ReSTOR®Toric +3.0D = AcrySof®IQReSTOR®+3.0DMultifocal ToricIOLModels SND1T3/SND1T4/SND1T5/SND1T6 ReSTOR® +4.0D = AcrySof®ReSTOR®Multifocal IOL (+4.0DAdd) Model SA60D3

	First	Eye	SecondEye			
8	ReSTOR® Toric +3.0 D (N=386)	ReSTOR® +4.0 D (N =188)	ReSTOR® Toric +3.0 D (N=383)	ReSTOR® +4.0 D (N=188)		
Secondary Surgical Intervention	15	5	13	6		
IOL repositioning due to IOL misalignment	1 <sup>a</sup>	0	0	0		
IOL repositioning due to inaccurate IOL placement	4b.c	0	0	0		
IOL repositioning due to haptic outside of the bag	1	1 0 0		0		
IOL replacement due to visual disturbances	0	2	0	2		
LASIK to correct residual refractive error	1	0	1	0		
Astigmatic keratotomy to correct residual refractive error (astigmatism)	1	0	0	0		
Lim bal relaxing incision to correct surgically induced astigm atism	1	0	1	0		
Limbal relaxing incision to correct pre- existing astigmatism	0	1	0	1		
Macular hole repair	0	0	1	0		
YAG laser capsulotomy for wrinkles, folds or strands in capsule	1 <sup>b</sup>	0	3	0		
Intraocular injection for wet age related macular degeneration	O	2 <sup>d</sup>	0	0		
Retinal detachment repair and prophylactic retinopexy	2	0	5 <sup>e</sup>	1		
Retained lens removal	2	0	1	1		
Corneal wound leak repair	0	0	1	1		
Anterior vitrectomy	1	0	0	0		

# Table 32: Secondary Surgical Interventions - First and Second Eyes

<sup>a</sup> One subject required an IOL repositioning surgery at the 6 month visit. The Investigator considered the event related to the patient's eye anatom y and the IOL rotation was assumed to have occurred within the first 24 hours following surgery. <sup>b</sup> One subject experienced floppy iris during surgery and required two repositioning procedures. The same subject also experienced a YAG laser capsulotomy for wrinkled capsule in the first eye. <sup>o</sup> The IOL was implanted at the incorrect axis in two subjects.

<sup>d</sup> One subject was administered two intraocular injections for wet age related macular degeneration in the first eye.

<sup>e</sup> One subject had one prophylactic retinopexy procedure performed in the first eye and three retinopexy procedures performed in the second eye.

ReSTOR®Toric+3.0D = AcrySof®IQReSTOR®+3.0D Multifocal Toric IOL Models

SND1T3/SND1T4/SND1T5/SND1T6

ReSTOR®+4.0 D = AcrySof®ReSTOR®MultifocalIOL (+4.0 D Add) Model SA60D3

### Visual Disturbances

A Patient Reported Outcomes instrument was developed and used in this dinical study to assess visual disturbances and distortions. The questionnaire administered was not validated according to FDA's guidance document entitled "Patient-reported outcome measures: use in medical product development to support labeling claims", dated December 2009. As demonstrated in Table 33, reports of visual disturbances/distortions were similar between the ReSTOR® Toric +3.0 DIOL and the control ReSTOR® +4.0 DIOL groups at 1 year. The highest rate of "severe" reports of visual disturbances/distortions at 1 year was for halos at 7.5% for ReSTOR® Toric +3.0 D IOL and 11.0% for the control ReSTOR®+4.0 DIOL.

		Re	STOR	Toric +3	.0 D	ReSTOR			R® +4.0	® +4.0 D	
Visual Disturbance	N	None %	Mild %	Mod <sup>a</sup> %	Severe %	N	None %	Mild %	Mod <sup>a</sup> %	Severe %	
Glare	372	40.6	36.3	19.6	3.5	182	35.2	36.8	25.3	2.7	
Halos	372	22.6	38.4	31.5	7.5	182	20.9	40.7	27.5	11.0	
Starbursts	372	37.4	39.0	19.4	4.3	182	34.6	37.4	19.2	8.8	
Hazy vision	372	55.1	33.1	10.5	1.3	182	51.6	30.8	17.0	0.5	
Blurred vision	372	70.7	19.1	9.4	0.8	182	69.2	23.6	7.1	0.0	
Distortion where straight lines look tilted	372	96.8	2.2	1.1	0.0	182	92.9	4.9	2.2	0.0	
Distortion where flat lines look curved	372	96.5	3.2	0.3	0.0	182	94.0	4.9	1.1	0.0	
Double vision	372	89.8	7.5	1.9	0.8	182	91.2	6.6	2.2	0.0	
Color distortion	371	94.3	5.1	0.5	0.0	182	95.1	3.8	1.1	0.0	
Feeling sick due to visual distortion	371	98.4	1.3	0.3	0.0	182	97.8	1.6	0.0	0.5	

### Table 33: Comparison of Visual Disturbances for ReSTOR® Toric +3.0 D and ReSTOR® +4.0 D 1 Year Postoperative (following second eye implantation)

<sup>a</sup> Mod = Moderate

ReSTOR® Toric +3.0 D = AcrySof® IQ ReSTOR®+3.0 D Multifocal Toric IOL Models

SND1T3/SND1T4/SND1T5/SND1T6

ReSTOR®+4.0 D = AcrySof® ReSTOR® Multifocal IOL (+4.0 D Add) Model SA60D3

### Spectacle Independence

A subjective questionnaire consisting of sponsor-developed questions was used in the study to assess spectacle independence following implantation with the IOL. However, the questionnaire was not determined to be a psychometrically valid assessment of "spectacle independence". Responses to items on this questionnaire were not meaningfully different between the two groups.

### Glistenings

95.7 % of ReSTOR® Toric and 97.3% of ReSTOR® subjects had no observation of glistenings in the first implanted eye and 96.0% of ReSTOR® Toric and 97.3% of ReSTOR® subjects had no observation of glistenings in the second implanted eye. None of the observed glistenings were reported as clinically significant by the implanting surgeons.

### HOW SUPPLIED

These apodized diffractive optic posterior chamber intraocular lenses are supplied dry, in a package term inally sterilized with ethylene oxide. They must be opened only under aseptic conditions (see DIRECTIONS FOR USE section).

### **EXPIRATION DATE**

Sterility is guaranteed unless the pouch is damaged or opened. The expiration date is clearly indicated on the outside of the lens package. Any lens held after the expiration date should be returned to Alcon Laboratories, Inc. (see RETURNED GOODS POLICY).

### **RETURNED GOODS POLICY**

In the United States, returned lenses will only be accepted in exchange for other products, not credit. All returns must be accompanied by an Alcon Laboratories, Inc., Returned Goods Number and should be shipped via traceable means. A Returned Goods Number is obtained by contacting Alcon Laboratories, Inc., Customer Service Department. Issuance of this number does not constitute final acceptance of the returned products. For detailed policy guidelines including exchange, please contact your Sales or Customer Service Representative.

Outside the United States, contact your Local Alcon Laboratories, Inc., office or distributors regarding the Returned Goods Policy.

### REFERENCE

Boettner EA. Wolter JR. Transmission of the ocular media. Invest Ophthalmol Vis Sci. 1962;1(6):776-83.

# SYMBOLS USED ON LABELING

SYMBOL	ENGLISH						
IOL	Intraocular lens						
PC	Posterior chamber						
PCL	Posterior chamber lens						
UV	Utraviolet						
D	Diopter (Spherical Equivalent)						
CYL	Cylinder Power						
ØB	Body diameter (Optic diameter)						
Ø <sub>T</sub>	Overall diameter (Overall length)						
2	Do not reuse						
Я	Use by						
STERILE EO	Sterilized by ethylene oxide						
SN	Serial Number						
$\Delta$	Caution						
***	Manufacturer						
113 F 45-C	Upper Limit of Temperature						
	Consult instructions for use						
(B) only	Caution: Federal (USA) Law restricts this device to sale by or on the order of a physician						



Alcon Laboratories, Inc. 6201 South Freeway Fort Worth, Texas 76134-2099 USA

U.S. Pat.: www.alconpatents.com

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# Appendix C: Directions for Use for ACRYSOF IQ RESTOR +2.5 D Multifocal IOL (Model SV25T0)

40-500-231-NEW



STERILE UV and Blue Light Filtering Foldable Single-piece Apodized Diffractive Aspheric Multifocal Posterior Chamber Lens

Caution: Federal (USA) law restricts this device to sale by or on the order of a physician.

### DESCRIPTION

DESCRIPTION The AcrySof® IQ ReSTOR® +2.5 D Apodized Diffractive Aspheric Multifocal Posterior Chamber Intraocular Lens (IOL) is an ultraviolet and blue light filtering foldable multifocal intraocular lens. The optical portion consists of a proprietary high refractive index hydrophobic acrylic material with a blue light filtering chromophore which filters light in a manner that approximates the human crystalline lens in the 400-475 nm blue light wavelength range (Boetner and Wolter, 1962). The optical portion is biconvex and consists of a soft acrylic material capable of being folded prior to insertion, allowing placement through an incision smaller than the optic diameter of the lens. After sugical insertion into the eye, the lens genty unfolds to restore the optical performance. The biconvex optic contains an aspheric apodized diffractive structure with a central refractive zone on the anterior surface. The apodized diffractive structure divides incoming light to provide a range of functional vision (defined as visual acuity of 20/40 or better) from distance to near. The anterior surface of the AcrySof® IQ ReSTOR® +2.5 D Multifocal IOL Model SV25T0 is designed with negative spherical aberration to compensate for the positive spherical aberration of the comea. Compared to other Alcon AcrySof® IQ ReSTOR® Multifocal IOL models (Models SN6AD1, NN6AD1, this IOL (Model SV25T0) provides an alternate option for clinicians to offer patients with the near add power of +2.5 D, with optimal vision at 53 cm and greater distance dominance in the energy distribution between near and far. The effects of this aspheric design feature have not been clinically assessed. The physical properties of these lenses are described in Figures 1-3 and Table 1. lenses are described in Figures 1-3 and Table 1.



Physical Characteristic	Description
Optic Type	Apodized Diffractive Aspheric Optic With a Central Refractive Zone
Optic Material	Ultraviolet and blue light filtering Acrylate/Methacrylate Copolymer
UV cutoff at 10% T	403 nm for 21 D (See Figure 2)
Index Of Refraction	1.55
Optic Powers	+6.0 - +30.0 (0.5 diopter increments) and +31.0 - +34.0 (1.0 diopter increments) with a +2.5 Diopter add power
Haptic Configuration	STABLEFORCE® Haptic
Haptic Material	Ultraviolet and blue light filtering Acrylate/Methacrylate Copolymer
Haptic Color	Yellow
Optic Diameter (mm)	6.0
Overall Length (mm)	13.0
Haptic Angle	0°

# Table 1: Physical Characteristics of AcrySof® IQ ReSTOR® +2.5 D Multifocal IOL Model SV25T0





NOTE:

Human crystalline lens data from Boettner and Wolter (1962).



# Figure 3: Theoretical Percentage of Light Energy at 550 nm Wavelength

### MODE OF ACTION

The AcrySof® IQ ReSTOR® +2.5 D Multifocal IOL is intended to be positioned in the posterior chamber of the eye, replacing the natural crystalline lens. This position allows the lens to function as a refractive medium in the correction of aphakia. This IOL has a biconvex optic containing an aspheric apodized diffractive structure with a central refractive zone on the anterior surface. The apodized diffractive structure divides incoming light to provide a range of functional vision (defined as visual acuity of 20/40 or better) from distance to near. This IOL provides an alternate option for clinicians to offer patients with an add power of +2.5 D designed to provide optimal vision at 53 cm.

### INDICATIONS

The AcrySof® IQ ReSTOR® +2.5 D Multifocal IOL is intended for primary implantation in the capsular bag of the eye for the visual correction of aphakia secondary to removal of a cataractous lens in adult patients with and without presbyopia, who desire near, intermediate, and distance vision with increased spectacle independence.

### WARNINGS

- 1. Some visual effects may be expected due to the superposition of focused and unfocused multiple images. These may include some perceptions of halos or radial lines around point sources of light (starbursts) under nighttime conditions, glare, double vision, haziness and blurred vision. As with other multifocal IOLs, there is a possibility that visual symptoms may be significant enough that the patient will request explant of the multifocal IOL.
- A reduction in contrast sensitivity as compared to a monofocal IOL may be experienced by some patients and may be more prevalent in low lighting conditions. Therefore, multifocal patients should exercise caution when driving at night or in poor visibility conditions.
- The physician should consider the following points that are unique to the use of AcrySof® IQ ReSTOR® +2.5 D Multifocal IOL:
  - The surgeon must target emmetropia to achieve optimal visual performance.
  - Patients with significant preoperative (determined by keratometry) or expected postoperative astigmatism
    ≥ 1.0 D may not achieve optimal visual outcomes.
  - Care should be taken to achieve IOL centration as lens decentration may result in a patient experiencing visual disturbances under certain lighting conditions.

### PRECAUTIONS

- Prior to surgery, prospective patients should be informed of the possible risks and benefits associated with the AcrySof® IQ ReSTOR® +2.5 D Multifocal IOL Model SV25T0. A Patient Information Brochure can be found at http://ecatalog.alcon.com/iol\_dfu/SV25T0\_us\_en.pdf. Please provide a copy of the Patient Information Brochure to the patient.
- As with all multifocal IOLs, spectacle independence rates will vary. Patients may need glasses when reading small print or looking at small objects.
- Posterior capsule opacification (PCO) may significantly affect the vision of patients with multifocal IOLs sooner in its progression than patients with monofocal IOLs. This may be due to the reduced contrast sensitivity observed with multifocal IOLs.
- The safety and effectiveness of the AcrySof® IQ ReSTOR® +2.5 D Multifocal IOL have not been substantiated in patients with the following pre-existing and intraoperative conditions.

### Pre-existing Conditions

- Significant irregular corneal aberration
- Retinal conditions or predisposition to retinal conditions, previous history of, or a predisposition to, retinal detachment or proliferative diabetic retinopathy, in which future treatment may be compromised by . implanting this le
  - [This precaution is included because multifocal IOLs may decrease the level of retinal detail on exam or during treatment slightly and this could make laser and retinal surgeries and the diagnosis of some conditions more challenging (for example, early diabetic retinopathy when only 1 or 2 microaneurysms are present)].
- Amblyopia
- Amonyopia Clinically severe corneal dystrophy (eg. epithelial, stromal, or endothelial dystrophy), keratitis, keratoconjunctivitis, keratouveitis, keratopathy, or kerectasia Any inflammation or edema (swelling) of the cornea Rubella, congenital, traumatic, or complicated cataracts

- Extremely shallow anterior chamber, not due to swollen cataract Recurrent anterior or posterior segment inflammation of unknown etiology, or any disease producing an inflammatory reaction in the eye (eg, iritis or uveitis)
- Aniridia Iris neovascularization
- Glaucoma (uncontrolled or controlled with medication)
- Microphthalmos
- Optic nerve atrophy
- Previous comeal transplant Pre-existing ocular conditions which may negatively impact stability of the implant
  - Color vision deficiencies [Studies have shown that color vision discrimination is not adversely affected in individuals implanted with the AcrySof® Natural IOL and normal color vision. The effect of the AcrySof® Natural IOL in subjects with hereditary color vision defects and acquired color vision defects secondary to ocular disease (eg, glaucoma, diabetic retinopathy, chronic uveitis, and other retinal or optic nerve diseases) has not been studied].
- Previous retinal detachment Diabetic retinopathy
- Previous refractive surgery

- Pregnancy
   Intraoperative Conditions
   Other planned ocular surgery procedures, including but not limited to, LASIK, astigmatic keratotomy, and
   The relaying incisions

  - Mechanical or surgical manipulation required to enlarge the pupil Dilated pupil size less than 4.5 mm just prior to implantation

  - Vitreous loss (significant) Anterior chamber bleeding (significant)

  - Uncontrolled positive intraocular pressure Complications in which the IOL stability could be compromised, including zonular separation

As with the implantation of any IOL, careful preoperative evaluation and sound clinical judgment should be used by the surgeon to decide the benefit/risk ratio before implanting a lens in a patient with one or more of these conditions.

- The clinical study of the AcrySof® IQ ReSTOR® +2.5 D Multifocal IOL Model SV25T0 was conducted with the lens intended for implantation in the capsular bag only. There are no clinical data to demonstrate its safety and 5.
- effectiveness for placement in the ciliary sulcus. Patients with preoperative problems such as corneal endothelial disease, abnormal cornea, macular 6. degeneration, retinal degeneration, glaucoma, and chronic drug miosis may not achieve the visual acuity of patients without such problems. The physician must determine the benefits to be derived from lens implantation when such conditions exist
- A high level of surgical skill is required for intraocular lens implantation. The surgeon should have observed 7. and/or assisted in numerous implantations and successfully completed one or more courses on intraocular lens
- and/or assisted in numerous implantations and successfully completed one or more courses on intraocular lens implantation before attempting to implant intraocular lenses. As with any surgical procedure, there is risk involved. Potential complications accompanying cataract or implant surgery may include, but are not limited to, the following: corneal endothelial damage, infection (endophthalmitis), retinal detachment, vitritis, cystoid macular edema, corneal edema, pupillary block, cyclitic membrane, iris prolapse, hypopyon, transient or persistent glaucoma, and secondary surgical intervention. Secondary surgical interventions include, but are not limited to: lens repositioning, lens replacement, vitreous 8. aspiration or indectomy for pupillary block, wound leak repair, and retinal detachment repair. Care should be taken to remove viscoelastic from the eye at the close of surgery.
- 9
- Do not re-sterilize these intraocular lenses by any method. Do not store intraocular lenses at temperatures over 45° C (113° F). 10. 11.
- Use only sterile intraocular irrigating solutions (such as B\$\$@ or B\$\$ PLUS® solution) to rinse and/or soak 12. lenses.

# CALCULATION OF LENS POWER

Accurate biometry is essential for successful visual outcomes. Preoperative calculation of required lens power for the AcrySof® IQ ReSTOR® +2.5 D Multifocal IOL should be determined by the surgeon's experience and preference. A reference SRK/T A-Constant value for optical biometry equipment such as IOLMaster\*\* or LenStar\*\* is listed on the outer label. This reference A-Constant anticipates the use of both corneal power and axial length values from optical biometry equipment with standard settings for a typical patient population and a spectacle far point at 6 meters. IOL power calculation methods are often included with biometry equipment, and they are also described in the references below. In general, lens constants must be "personalized" to compensate for such things as differences in instrumentation, surgical techniques, and IOL power calculation methods that may exist between different clinical sites.

\*\*IOLMaster is a trademark of Carl Zeiss; LenStar is a trademark of HAAG-STREIT.

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Holladay JT. Standardizing constants for ultrasonic biometry, keratometry, and intraocular lens power calculations. J Cataract Refract Surg. 1997;23(9):1356-70.

Olsen T. Calculation of intraocular lens power: a review. Acta Ophthalmol Scand. 2007;85(5):472-85.

Retzlaff JA, Sanders DR, Kraff M. Lens Implant Power Calculation. 3rd ed. Thorofare (NJ): Slack, Inc.; 1990. http://www.augenklinik.uni-wuerzburg.de/ulib/index.htm

# DIRECTIONS FOR USE

- 1. Examine the label on the unopened package for model, powers (base and add), proper configuration, and expiration date.
- After opening the cardboard storage container, verify lens case information (eg, model, power, serial number) is consistent with information on outer package labeling.
- This device is sterile until the inner pouch is opened. Inspect the pouch carefully for tears, cuts, punctures, or other signs that the pouch has been opened or damaged. DO NOT implant the IOL if the sterility has been compromised (see RETURNED GOODS POLICY).
- To remove the lens, open the undamaged pouch and transfer the case to a sterile environment. Carefully open the case to expose the lens.
- To minimize the occurrence of marks on the lens due to handling, all instrumentation should be scrupulously clean. Any forceps used for lens handling must have round edges and smooth surfaces.
- When removing the lens from the case, DO NOT grasp the optical area with forceps. The IOL should only be handled by the haptics. Handle lenses carefully to avoid damage to lens surfaces or haptics. DO NOT attempt to reshape haptics in any way.
- Rinse the lens thoroughly using sterile intraocular irrigating solution such as BSS® or BSS PLUS® solution. Prior to insertion, the lens should be carefully examined to ensure that particles have not adhered during handling.
- Alcon recommends that the AcrySof® IQ ReSTOR® +2.5 D Multifocal IOLs be used with an Alcon approved delivery system.
- There are various surgical procedures that can be used, and the surgeon should select a procedure that is appropriate for the patient. Current techniques, appropriate instrumentation, and a list of their equivalents for delivery and implantation are available from Alcon. Surgeons should verify that appropriate instrumentation is available prior to surgery.
- 10. DO NOT reuse this IOL. This device is for single use only.

# PATIENT REPORTING AND REGISTRATION

Events that reasonably suggest that the lens may have caused or contributed to death or serious injury, including events occurring as a result of failure of a medical device to meet its performance specifications or otherwise perform as intended, should be reported to Alcon Laboratories, Inc. This information is being requested from all surgeons in order to document potential long-term effects of intraocular lens implantation. Surgeons in the United States should use the following address and telephone number for reporting adverse events involving these intraocular lenses:

Alcon Laboratories, Inc. Medical Safety (AB 2-6) 6201 South Freeway Fort Worth, TX 76134-2099 Call Toll free: 1-800-757-9780 in the United States Outside the United States, contact local Alcon offices or distributors regarding any reports of adverse events.

The Patient Identification Card included in the package is to be completed and given to the patient, together with instructions to keep the card as a permanent record to be shown to any eye care practitioner that the patient consults in the future. In the United States, each patient must be registered with Alcon Laboratories, Inc., immediately following implantation of one of these lenses. Registration is accomplished by completing the Implant Registration Card that is enclosed in the lens box and mailing it to Alcon Laboratories, Inc., Patient registration is essential for the long-term patient follow-up program and will assist Alcon Laboratories, Inc., in responding to reports of adverse events.

# CLINICAL STUDIES

The data from a recent clinical study of the AcrySof® IQ ReSTOR® +2.5 D Multifocal IOL Model SV25T0, and data from two relevant prior clinical studies are included in this section:

- A clinical study was conducted to assess the safety and effectiveness of the AcrySof® IQ ReSTOR® +2.5 D Multifocal IOL Model SV25T0.
- 2. A prior clinical study, including assessment of color perception, was conducted to demonstrate the safety and effectiveness of the AcrySof® Natural single-piece monofocal IOL Model SB30AL. The AcrySof® IQ ReSTOR® +2.5 D Multifocal IOL Model SV25T0 is also a single-piece IOL using the same material mechanical platform and the same blue filtering chromophore, as the Model SB30AL. The data showed the blue filtering chromophore did not have an effect on color perception in subjects with normal color vision prior to surgery. These results provide an expanded description of the safety profile expected of the AcrySof® IQ ReSTOR® +2.5 D Multifocal IOL Model SV25T0.
- 3. A prior clinical study, including a night driving simulator sub-study, was conducted to demonstrate the safety and effectiveness of the non-blue-filtering multi-piece and single-piece AcrySof® ReSTOR® Models MA60D3 and SA60D3. The AcrySof® IQ ReSTOR® +2.5 D Multifocal IOL Model SV25T0 uses an apodized diffractive optic as in Models MA60D3 and SA60D3. The safety data (adverse events and night driving simulation results) from this study provide an expanded description of the safety profile expected of the AcrySof® IQ ReSTOR® +2.5 D Multifocal IOL Model SV25T0.

Summaries of these clinical studies are provided below. Please use caution when comparing these results with results from similar device studies due to potential differences in patient cohorts, test methods, etc.

## AcrySof® IQ ReSTOR® +2.5 D MULTIFOCAL INTRAOCULAR LENS (IOL) (Model SV25T0)

The AcrySof® IQ ReSTOR® +2.5 D Multifocal Intraocular Lens (IOL) study was a prospective, multicenter, randomized, masked (to subjects and vision examiners), controlled clinical investigation designed to assess the safety and effectiveness of the AcrySof® IQ ReSTOR® +2.5 D Multifocal Intraocular Lens Model SV25T0 in adult subjects secondary to removal of a cataractous lens with and without presbyopia. A total of 320 subjects were implanted in this clinical study, with 155 subjects receiving IOL Model SV25T0 and 165 subjects receiving the monofocal control lens Model SN80WF. In the data tables in this section, "+2.5 D Multifocal" refers to Model SV25T0 and "Monofocal" refers to Model SN80WF.

The study population consisted of 60.3% females and 39.7% males. Subjects were 91.3% White, 6.6% Black or African American, 0.9% Asian, 0.6% American Indian or Alaska Native, 0.3% multi-race, and 0.3% designated "Other." Five percent (5%) of the study population designated ethnicity as Hispanic. A Best Case cohort (subjects with no preoperative ocular pathology or postoperative macular degeneration and no major protocol deviations) consisted of 145 AcrySof® IQ ReSTOR® +2.5 D Multifocal IOL Model SV25T0 subjects and 149 Monofocal Control subjects. The mean age for the study population was 69.0 ± 9.0 years. The length of subject follow-up was 6 months.

## Mean Visual Acuity

Monocular visual acuity results are presented for first implanted eyes. AcrySof® IQ ReSTOR® +2.5 D Multifocal IOL subjects experienced a significant increase in distance corrected photopic monocular near vision (at 40 cm) as compared to monofocal control subjects. The mean photopic monocular distance corrected visual acuity at 40 cm for subjects implanted with the AcrySof® IQ ReSTOR® +2.5 D Multifocal IOL was 0.208 logMAR (~2 lines on an ETDRS visual acuity chart) better than those implanted with the monofocal lens (p < 0.001).

AcrySof® IQ ReSTOR® +2.5 D Multifocal IOL subjects also experienced a significant increase in distance corrected photopic monocular intermediate vision (at 53 cm) as compared to the monofocal control subjects. The mean photopic monocular distance corrected visual acuity at the 53 cm test distance for subjects implanted with the AcrySof® IQ ReSTOR® +2.5 D Multifocal IOL was 0.190 logMAR better (~2 lines) than for those implanted with the monofocal lens (p < 0.0001).

Descriptive statistics for monocular (first eye implanted) and binocular mean distance corrected near (33 cm and 40 cm), intermediate (53 cm and 60 cm), and distance (4 m) visual acuity (VA) are shown in Table 2. AcrySof® IQ ReSTOR® +2.5 D Multifocal IOL subjects achieved uncorrected and best corrected mean distance visual acuities similar to those of the monofocal control subjects.

	+2.	.5 D Multifo (N=155)	cal	Monofocal (N=165)			
		n	Mean	SD	n	Mean	SD
VA @ 4 m	Monocular - First Eye	153	0.02	0.122	160	0.00	0.107
	Binocular	153	-0.04	0.100	159	-0.06	0.102
VA @ 60 cm	Monocular - First Eye	153	0.33	0.174	160	0.43	0.169
	Binocular	153	0.23	0.143	159	0.34	0.162
VA @ 53 cm	Monocular - First Eye	153	0.32	0.172	159	0.52	0.182
	Binocular	153	0.24	0.145	158	0.40	0.161
VA @ 40 cm	Monocular - First Eye	153	0.43	0.170	160	0.64	0.184
	Binocular	153	0.34	0.151	159	0.52	0.182
VA @ 33 cm	Monocular - First Eye	153	0.56	0.175	160	0.70	0.189
	Binocular	153	0.47	0.168	159	0.60	0.190

Table 2: Distance Corrected Visual Acuity (logMAR) at 6 Months Postoperative, All Implanted

# Categorical Binocular Visual Acuity

Categorical binocular visual acuity (VA) results for subjects at 6 months postoperative are summarized in Tables 3-4 below. Each column shows the proportion of subjects achieving the indicated visual acuity for each test condition. Table 3 provides binocular photopic visual acuity at 40 cm, 53 cm, 60 cm, and at best distance. The best distance is the near distance at which each subject held the near visual acuity chart to obtain his or her best visual outcome. Table 4 provides binocular photopic visual acuity at distance (4 m). The percentage of subjects achieving 20/20 visual acuity at distance (4 m) was similar between the two IOLs.

	Lens Model	Sample Size	20/20	20/25	20/32	20/40	20/50	20/63	Worse than 20/63
		N	%	%	%	%	%	%	%
Distance Corrected at 60 cm	+2.5 D Multifocal	153	11.1	22.2	28.8	20.3	11.8	4.6	1.3
	Monofocal	159	4.4	8.8	22.0	16.4	28.9	12.6	6.9
Uncorrected at 60 cm	+2.5 D Multifocal	153	9.2	19.0	26.8	24.2	12.4	7.2	1.3
	Monofocal	159	6.3	20.1	22.6	18.9	14.5	8.8	8.8
Distance Corrected at 53 cm	+2.5 D Multifocal	153	9.2	22.2	24.2	19.6	15.7	7.2	2.0
	Monofocal	158	1.3	3.8	14.6	15.8	27.2	22.8	14.6
Uncorrected at 53 cm	+2.5 D Multifocal	153	9.2	15.7	25.5	22.2	17.6	7.8	2.0
	Monofocal	158	3.2	7.0	21.5	24.7	17.7	14.6	11.4
Best Corrected at 40 cm	+2.5 D Multifocal	153	29.4	29.4	20.9	12.4	7.2	0.0	0.7
	Monofocal	159	52.2	20.1	15.1	9.4	1.3	1.3	0.6
Distance Corrected at 40 cm	+2.5 D Multifocal	153	1.3	7.2	22.2	26.8	23.5	9.8	9.2
	Monofocal	159	0.0	1.9	3.8	13.8	19.5	20.8	40.3
Uncorrected at 40 cm	+2.5 D Multifocal	153	2.0	13.1	15.7	24.8	20.9	14.4	9.2
	Monofocal	159	0.0	3.1	13.2	15.1	18.9	17.0	32.7
Distance Corrected at best distance	+2.5 D Multifocal	153	7.8	15.0	20.3	20.9	13.7	15.0	7.2
	Monofocal	159	0.6	5.0	10.7	18.9	11.9	21.4	31.4
Uncorrected at best distance	+2.5 D Multifocal	153	4.6	13.1	19.0	25.5	18.3	8.5	11.1
	Monofocal	159	4.4	7.5	13.8	17.0	15.1	20.1	22.0

Table 3: Categorical Binocular Photopic Visual Acuity (60, 53, and 40 cm, and Best Distance) by Lens Model, All Implanted, 6 Months Postoperative

	Lens Model	Sample Size	20/20	20/25	20/32	20/40	20/50	20/63	Worse than 20/63
		N	%	%	%	%	%	%	%
Best Corrected	+2.5 D Multifocal	153	88.2	9.2	1.3	1.3	0.0	0.0	0.0
	Monofocal	159	90.6	6.9	1.3	0.6	0.0	0.6	0.0
Uncorrected	+2.5 D Multifocal	153	75.8	19.0	0.7	2.6	1.3	0.0	0.7
	Monofocal	159	77.4	15.1	6.3	1.3	0.0	0.0	0.0

# Table 4: Categorical Binocular Photopic Distance Visual Acuity (4 m) by Lens Model, All Implanted, 6 Months Postoperative

# Categorical Monocular Visual Acuity

The following is a summary of categorical monocular visual acuity (VA) results for the first eyes implanted with the AcrySof® IQ ReSTOR® +2.5 D Multifocal IOL Model SV25T0 and monofocal control IOL Model SN60WF at 6 months postoperative. The data are summarized in Tables 5-6 below. Each column shows the categorical proportion of subjects achieving the indicated visual acuity for each test condition. Table 5 provides categorical monocular photopic visual acuity at 40 cm, 53 cm, and at best distance. The best distance is the near distance at which each subject held the near visual acuity chart to obtain his or her best visual outcome. Mean monocular distance corrected VA for the +2.5 D multifocal IOL was approximately 2 lines better than the monofocal control IOL at 53 cm and 40 cm. Table 6 provides categorical monocular photopic visual acuity at distance (4 m). The percentage of subjects achieving 20/20 visual acuity at distance (4 m) was fairly similar between the +2.5 D Multifocal and Monofocal IOLs.

Table 5: Categorical Monocular Photopic Visual Acuity (53 cm, 40 cm, and Best Distance) by Lens Model, Primary Eye, All Implanted, 6 Months Postoperative

	Lens Model	Sample Size	20/20	20/25	20/32	20/40	20/50	20/63	Worse than 20/63
		N	%	%	%	%	%	%	%
Distance Corrected at 53 cm	+2.5 D Multifocal	153	2.0	14.4	19.0	27.5	13.7	16.3	7.2
	Monofocal	159	0.0	1.3	6.3	11.3	15.7	25.8	39.6
Uncorrected at 53 cm	+2.5 D Multifocal	153	2.6	5.2	15.0	26.1	24.8	11.8	14.4
	Monofocal	159	0.0	5.0	9.4	16.4	18.2	19.5	31.4
Best Corrected at 40 cm	+2.5 D Multifocal	153	18.3	28.1	20.9	17.0	9.8	2.6	3.3
	Monofocal	160	30.6	33.1	16.9	8.1	6.3	2.5	2.5
Distance Corrected at 40 cm	+2.5 D Multifocal	153	1.3	3.9	10.5	18.3	27.5	18.3	20.3
	Monofocal	160	0.0	0.0	2.5	3.8	10.0	14.4	69.4
Uncorrected at 40 cm	+2.5 D Multifocal	153	0.7	4.6	11.1	11.8	24.8	22.9	24.2
	Monofocal	160	0.0	0.0	6.3	6.3	16.3	14.4	56.9
Distance Corrected at best distance	+2.5 D Multifocal	153	3.3	7.8	17.0	16.3	21.6	13.1	20.9
	Monofocal	160	0.0	1.3	4.4	9.4	16.3	21.9	46.9
Uncorrected at best distance	+2.5 D Multifocal	153	2.0	6.5	10.5	24.2	17.0	17.6	22.2
	Monofocal	160	0.6	5.0	8.8	11.3	13.1	18.8	42.5

	-			-			-		
	Lens Model	Sample Size	20/20	20/25	20/32	20/40	20/50	20/63	Worse than 20/63
		N	%	%	%	%	%	%	%
Best Corrected	+2.5 D Multifocal	153	71.9	17.0	7.2	2.6	0.7	0.0	0.7
	Monofocal	160	75.0	16.3	7.5	0.6	0.6	0.0	0.0
Uncorrected	+2.5 D Multifocal	153	39.2	35.3	13.7	5.9	4.6	0.7	0.7
	Monofocal	160	46.9	25.0	16.9	8.1	2.5	0.0	0.6

Table 6: Categorical Monocular Photopic Distance Visual Acuity (4 m)
by Lens Model, Primary Eye, All Implanted, 6 Months Postoperative

### Binocular Defocus Curves

A binocular refraction defocus curves hows two peaks, with one at the zero baseline position, which corresponds to the distance corrected binocular visual acuity obtained at the distance focal point of the lens, and one near the -2.0 D position, which corresponds to the distance corrected binocular visual acuity obtained at the distance focal point of the lens, and one near the -2.0 D position, which corresponds to the distance corrected binocular visual acuity obtained at the intermediate focal point of the lens (53 cm). The distance peak of this curve demonstrates that AcrySof® IQ ReSTOR® IOL subjects achieved a mean distance visual acuity of 20/20 or better with an additional increased depth of focus from +2.0 D to -2.75 D, as compared to monofocal control subjects. This additional increased depth of focus translates to a mean intermediate visual acuity of 20/32 or better at the intermediate distances, most pronounced around 53 cm, with almost a two line visual acuity improvement for subjects implanted with a AcrySof® IQ ReSTOR® +2.5 D Multifocal IOL versus the monofocal control (Figure 4).





### Contrast Sensitivity

Contrast Sensitivity Binocular best corrected distance contrast sensitivity was performed using a sine wave grating chart (Vector/Vision CSV100DE) at the 4-8 month exam under four conditions: photopic without glare, photopic with glare, mesopic without glare, and mesopic with glare. Descriptive statistics including mean and median contrast scores, standard deviations (SD), ranges (Min, Max), and two-sided 90% confidence intervals are provided for the AcrySof® IQ ReSTOR® +2.5 D Multifocal IOL Model SV25T0 group and for the Model SN80WF monofocal IOL group under each photopic lighting condition and spatial frequency (Table 7) and each mesopic lighting condition and spatial frequency (Table 8). For some measurement conditions, one or more patients could not see any contrast gratings for a specific spatial frequency, therefore the values shown with '<' are overestimates and the standard deviations shown with '>' are underestimates. The number and percent of subjects unable to see any gratings for each specific measurement condition/spatial frequency are shown in the table in the 'Number Scoring (-1)' rows. The percentage of subjects who could not see any gratings ranged from 0.8% (3 cpd, photopic without glare) to 31.6% (12 cpd, mesopic with glare) in the AcrySof® IQ ReSTOR® +2.5 D Multifocal IOL Model SV25T0 group and form 0% (3 and 6 cpd, photopic without glare) to 20.4% (12 cpd, mesopic with glare) in the Model SN80WF monofocal IOL group. (3 and 6 cpd, photopic without glare) to 20.4% (12 cpd, mesopic with glare) in the Model SN60WF monofocal IOL group.

		Withou	ıt Glare	With	Glare
Frequency	y	+2.5 D Multifocal (N=133)	Monofocal (N=137)	+2.5 D Multifocal (N=133)	Monofocal (N=137)
3 CPD	Not Assessed	1 (0.8%)	4 (2.9%)	1 (0.8%)	4 (2.9%)
	Number Assessed	132 (99.2%)	133 (97.1%)	132 (99.2%)	133 (97.1%)
	Number Scoring (-1)	1 (0.8%)	0 (0.0%)	2 (1.5%)	2 (1.5%)
	Number with Data for Analysis	131 (98.5%)	133 (97.1%)	130 (97.7%)	131 (95.6%)
	Mean	<1.676	1.743	<1.608	<1.692
	Median	<1.633	1.785	<1.633	<1.785
	SD	>0.259	0.203	>0.307	>0.274
	(Min, Max)	(<0.70, 2.08)	(1.18, 2.08)	(<0.70, 2.08)	(<0.70, 2.08)
	CI	(<1.639, 1.714)	(1.714, 1.773)	(<1.563, 1.653)	(<1.652, 1.732)
6 CPD	Not Assessed	1 (0.8%)	4 (2.9%)	1 (0.8%)	4 (2.9%)
	Number Assessed	132 (99.2%)	133 (97.1%)	132 (99.2%)	133 (97.1%)
	Number Scoring (-1)	2 (1.5%)	0 (0.0%)	15 (11.3%)	8 (5.8%)
	Number with Data for Analysis	130 (97,7%)	133 (97,1%)	117 (88.0%)	125 (91.2%)
	Mean	<1.816	1,938	<1.684	<1.844
	Median	<1.845	1,996	<1.699	<1.845
	SD	>0.256	0.251	>0.316	>0.309
	(Min. Max)	(<0.90, 2.29)	(1.20, 2.29)	(<0.90, 2.29)	(<0.90, 2.29)
	CI	(<1.778, 1.853)	(1.902, 1.974)	(<1.636, 1.733)	(<1.798, 1.889)
	-				
12 CPD	Not Assessed	1 (0.8%)	4 (2.9%)	1 (0.8%)	4 (2.9%)
	Number Assessed	132 (99.2%)	133 (97.1%)	132 (99.2%)	133 (97.1%)
	Number Scoring (-1)	3 (2.3%)	1 (0.7%)	15 (11.3%)	6 (4.4%)
	Number with Data for Analysis	129 (97.0%)	132 (96.4%)	117 (88.0%)	127 (92.7%)
	Mean	<1.460	<1.555	<1.334	<1.475
	Median	<1.544	<1.544	<1.398	<1.544
	SD	>0.312	>0.312	>0.321	>0.336
	(Min, Max)	(<0.60, 2.00)	(<0.60, 2.00)	(<0.60, 2.00)	(<0.60, 2.00)
	CI	(<1.414, 1.505)	(<1.510, 1.599)	(<1.285, 1.383)	(<1.426, 1.524)
	-				
18 CPD	Not Assessed	1 (0.8%)	4 (2.9%)	1 (0.8%)	4 (2.9%)
	Number Assessed	132 (99.2%)	133 (97.1%)	132 (99.2%)	133 (97.1%)
	Number Scoring (-1)	2 (1.5%)	2 (1.5%)	13 (9.8%)	5 (3.6%)
	Number with Data for Analysis	130 (97.7%)	131 (95.6%)	119 (89.5%)	128 (93.4%)
	Mean	<0.970	<1.109	<0.914	<1.043
	Median	<0.978	<1.114	<0.978	<1.114
	SD	>0.348	>0.325	>0.333	>0.361
	(Min, Max)	(<0.18, 1.56)	(<0.18, 1.56)	(<0.18, 1.56)	(<0.18, 1.56)
	CI	(<0.919, 1.021)	(<1.062, 1.156)	(<0.863, 0.964)	(<0.990, 1.096)
SD = Stan	dard Deviation				

Table 7: Descriptive Statistics for Binocular Photopic Contrast Sensitivity at Visit 4	4A
(4-6 months postoperative, Best Case Population)	

6 Confidence Interval -sided 907

CPD = Cycles Per Degree

The score was set to (-1) when a subject could not complete a sensitivity measurement.

For mean and variability estimations, scores of (-1) were excluded from the calculations. Hence the corresponding mean and median measures are overestimated and variability measures are underestimated.

Column header is number of subjects in the best case population

Number assessed is number in the best case population minus number not assessed.

Number with data for analysis is number assessed minus number scoring (-1).

		Witho	ut Glare	With	Glare
Frequency	,	+2.5 D Multifocal (N=133)	Monofocal (N=137)	+2.5 D Multifocal (N=133)	Monofocal (N=137)
1.5 CPD	Not Assessed	1 (0.8%)	4 (2.9%)	1 (0.8%)	4 (2.9%)
	Number Assessed	132 (99.2%)	133 (97.1%)	132 (99.2%)	133 (97.1%)
	Number Scoring (-1)	4 (3.0%)	2 (1.5%)	5 (3.8%)	4 (2.9%)
	Number with Data for Analysis	128 (96.2%)	131 (95.6%)	127 (95.5%)	129 (94.2%)
	Mean	<1.594	<1.622	<1.536	<1.596
	Median	<1.595	<1.595	<1.520	<1.670
	SD	>0.224	>0.204	>0.237	>0.238
	(Min, Max)	(<0.83, 1.97)	(<1.07, 1.97)	(<0.90, 1.97)	(<0.98, 1.97)
	CI	(<1.562, 1.627)	(<1.593, 1.652)	(<1.501, 1.570)	(<1.561, 1.631)
	•				
3 CPD	Not Assessed	1 (0.8%)	4 (2.9%)	1 (0.8%)	4 (2.9%)
	Number Assessed	132 (99.2%)	133 (97.1%)	132 (99.2%)	133 (97.1%)
	Number Scoring (-1)	1 (0.8%)	1 (0.7%)	4 (3.0%)	3 (2.2%)
	Number with Data for Analysis	131 (98.5%)	132 (96.4%)	128 (96.2%)	130 (94.9%)
	Mean	<1.563	<1.618	<1.542	<1.600
	Median	<1.564	<1.633	<1.562	<1.599
	SD	>0.267	>0.226	>0.292	>0.296
	(Min, Max)	(<0.70, 2.08)	(<1.00, 2.08)	(<0.70, 2.08)	(<-0.35, 2.08)
	CI	(<1.525, 1.602)	(<1.586, 1.651)	(<1.499, 1.585)	(<1.557, 1.643)
	•				
6 CPD	Not Assessed	1 (0.8%)	4 (2.9%)	1 (0.8%)	4 (2.9%)
	Number Assessed	132 (99.2%)	133 (97.1%)	132 (99.2%)	133 (97.1%)
	Number Scoring (-1)	10 (7.5%)	3 (2.2%)	18 (13.5%)	7 (5.1%)
	Number with Data for Analysis	122 (91.7%)	130 (94.9%)	114 (85.7%)	126 (92.0%)
	Mean	<1.581	<1.673	<1.543	<1.617
	Median	<1.628	<1.663	<1.556	<1.620
	SD	>0.296	>0.275	>0.329	>0.277
	(Min, Max)	(<0.90, 2.29)	(<0.90, 2.29)	(<0.90, 2.29)	(<0.90, 2.29)
	CI	(<1.537, 1.625)	(<1.633, 1.713)	(<1.492, 1.594)	(<1.577, 1.658)
12 CPD	Not Assessed	1 (0.8%)	4 (2.9%)	1 (0.8%)	4 (2.9%)
	Number Assessed	132 (99.2%)	133 (97.1%)	132 (99.2%)	133 (97.1%)
	Number Scoring (-1)	30 (22.6%)	21 (15.3%)	42 (31.6%)	28 (20.4%)
	Number with Data for Analysis	102 (76.7%)	112 (81.8%)	90 (67.7%)	105 (76.6%)
	Mean	<1.077	<1.208	<1.043	<1.153
	Median	<1.079	<1.167	<0.929	<1.079
	SD	>0.363	>0.345	>0.385	>0.375
	(Min, Max)	(<0.60, 2.00)	(<0.60, 2.00)	(<0.60, 2.00)	(<0.60, 2.00)
	CI	(<1.017, 1.138)	(<1.154, 1.262)	(<0.975, 1,110)	(<1.092, 1.214)
SD = Stand	dard Deviation	,	,	,	,

# Table 8: Descriptive Statistics for Binocular Mesopic Contrast Sensitivity at Visit 4A (4-6 months postoperative, Best Case Population)

CI = Two-sided 90% Confidence Interval

CPD = Cycles Per Degree

The score was set to (-1) when a subject could not complete a sensitivity measurement.

For mean and variability estimations, scores of (-1) were excluded from the calculations. Hence the corresponding mean and median measures are overestimated and variability measures are underestimated.

Column header is number of subjects in the best case population

Number assessed is number in the best case population minus number not assessed.

Number with data for analysis is number assessed minus number scoring (-1).

Mesopic contrast tests were conducted twice and the official sensitivity was defined as the mean of the two individual measures. The mean score was (-1) if either or both of the individual scores were (-1).

# Adverse Events

The safety of the AcrySof® IQ ReSTOR® +2.5 D Multifocal IOL Model SV25T0 is based in part on the safety demonstrated by its parent Model MA60D3 and Model SA60D3.

No unanticipated serious adverse device effects were observed in any subjects implanted with Models SV25T0 or SN80WF. There were no reports of explants during this clinical study. Adverse events shown in Table 9 were reported as unrelated to the IOL.

	First implanted eye						Second implanted eye									
	+2.5 D Multifocal (N = 155)			Monofocal (N = 165)			+2.5 D Multifocal (N = 155)				Monofocal (N = 163)					
	n	%	SPE %	p-value*	n	%	SPE %	p-value*	n	%	SPE %	p-value*	n	%	SPE %	p-value*
Cumulative Adverse Events																
Cystoid macular oedema	2	1.3	3.0	0.9484	0	0.0	3.0	1.0000	2	1.3	3.0	0.9484	0	0.0	3.0	1.0000
Endophthalmitis	0	0.0	0.1	1.0000	0	0.0	0.1	1.0000	0	0.0	0.1	1.0000	0	0.0	0.1	1.0000
Hypopyon	0	0.0	0.3	1.0000	0	0.0	0.3	1.0000	0	0.0	0.3	1.0000	0	0.0	0.3	1.0000
Lens dislocated from posterior chamber	0	0.0	0.1	1.0000	0	0.0	0.1	1.0000	0	0.0	0.1	1.0000	0	0.0	0.1	1.0000
Pupillary block	0	0.0	0.1	1.0000	0	0.0	0.1	1.0000	0	0.0	0.1	1.0000	0	0.0	0.1	1.0000
Retinal detachment	0	0.0	0.3	1.0000	0	0.0	0.3	1.0000	0	0.0	0.3	1.0000	0	0.0	0.3	1.0000
Secondary surgical intervention	0	0.0	0.8	1.0000	0	0.0	0.8	1.0000	0	0.0	0.8	1.0000	3	1.8	0.8	0.1432
Persistent Adverse Events																
Corneal stroma oedema	0	0.0	0.3	1.0000	0	0.0	0.3	1.0000	0	0.0	0.3	1.0000	0	0.0	0.3	1.0000
Cystoid macular oedema	1	0.6	0.5	0.5402	0	0.0	0.5	1.0000	1	0.6	0.5	0.5402	0	0.0	0.5	1.0000
Iritis	1	0.6	0.3	0.3723	0	0.0	0.3	1.0000	1	0.6	0.3	0.3723	0	0.0	0.3	1.0000
Raised IOP requiring treatment	0	0.0	0.4	1.0000	1	0.6	0.4	0.4838	0	0.0	0.4	1.0000	1	0.6	0.4	0.4797

Table 9: Cumulative and Persistent Adverse	Events and SPE Rates,	, Safety, 6 Mont	hs Postoperative
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SPE = Safety and Performance Endpoints

\* One-sided exact binomial test (alpha = .05)

# Visual Disturbances

A new Patient Reported Outcomes instrument (Assessment of Photic Phenomena & Lens EffectS, abbreviated APPLES) was developed and used in this clinical study. The instrument administered was not validated according to FDA's guidance document entitled "Patient-reported outcome measures: use in medical product development to support labeling claims", dated December 2009. Patient reported rates of visual disturbances are presented in Table 10 stratified by rating (None, Mild, Moderate, and Severe).

At Visit 4A (6 months), there were more reports of severe halos and starbursts in the AcrySof® IQ ReSTOR® +2.5 D Multifocal IOL group while other categories of reports of severe visual disturbance were the same or lower compared to the monofocal IOL group.

		+2.5 D Multifocal					Monofocal				
	N	None	Mild	Mod	Severe	N	None	Mild	Mod		
		%	%	%	%		%	%	%	%	
Glare	153	39.9	35.9	20.9	3.3	160	49.4	33.8	13.1	3.8	
Halos	153	37.3	30.1	22.2	10.5	160	61.9	26.9	7.5	3.8	
Starbursts	153	55.6	24.8	11.8	7.8	160	61.9	26.9	7.5	3.8	
Hazy vision	153	66.0	26.8	6.5	0.7	160	66.9	24.4	7.5	1.3	
Blurred vision	153	73.9	19.6	6.5	0.0	160	71.9	23.1	5.0	0.0	
Distortion where straight lines look tilted	153	90.8	7.2	2.0	0.0	160	93.1	5.6	0.0	1.3	
Distortion where flat lines look curved	153	95.4	2.6	2.0	0.0	160	95.0	3.1	0.6	1.3	
Double vision	153	92.8	4.6	2.0	0.7	160	95.6	2.5	0.6	1.3	
Color distortion	153	94.1	5.2	0.7	0.0	160	93.8	5.6	0.6	0.0	
Feeling sick due to distortion	153	95.4	3.9	0.7	0.0	160	91.9	6.3	1.9	0.0	

## Table 10: Visual Disturbances, Safety, 6 Months Postoperative

### Glistenings

AcrySof® IOLs had a low rate of reported glistenings: 95.5% of all 624 implanted lenses demonstrated no glistenings at 6 months. For the 4.5% that reported glistenings, none were reported to be clinically significant by the implanting surgeon.

### 2. AcrySof® NATURAL SINGLE-PIECE IOL CLINICAL STUDY (Model SB30AL)

A clinical study was conducted on subjects receiving the monofocal AcrySof® Natural Single Piece IOL Model SB30AL compared to the monofocal AcrySof® UV Single Piece IOL Model SA30AL. Subjects were followed for a minimum of one year postoperatively and the results provided reasonable assurance of the safety and effectiveness of AcrySof® Natural Single Piece IOL Model SB30AL for the visual correction of aphakia.

### Color Perception

Color perception testing using the Farnsworth D-15 Panel Test was conducted on all subjects at the 120 to 180 day postoperative period. Of the 109 subjects with normal color vision implanted with a AcrySof® Natural IOL Model SB30AL in the first operative eye and examined at the 120 to 180 day postoperative visit, 107 (98.2%) passed the color perception test. Of the 102 subjects with normal color vision implanted with a AcrySof® UV IOL Model SA30AL in the first operative eye and examined at the 120 to 180 day postoperative of UV IOL Model SA30AL in the first operative eye and examined at the 120 to 180 day postoperative visit, 97 (95.1%) passed the color perception test. There were no statistically significant differences between AcrySof® Natural IOL Model SB30AL and AcrySof® UV IOL Model SA30AL for the percent of subjects that passed the color perception test at the 120 to 180 day postoperative visit. Therefore, the addition of the proprietary chromophore did not negatively affect color vision in patients with normal color vision.

3. AcrySof® ReSTOR® APODIZED DIFFRACTIVE OPTIC POSTERIOR CHAMBER IOL CLINICAL STUDIES Multicenter clinical studies were conducted in the United States and Europe to establish the safety and effectiveness of the multifocal AcrySof® ReSTOR® Apodized Diffractive Optic IOL (Models MA60D3 and SA60D3). An All Implanted cohort consisted of a total of 566 first-eye implanted ReSTOR® IOL (440 MA60D3 and 128 SA60D3) subjects and 194 AcrySof® Model MA60BM monofocal IOL subjects. A Best Case cohort (subjects with no clinically significant preoperative ocular pathology or postoperative macular degeneration) consisted of 391 Model MA60D3 and 109 Model SA60D3 ReSTOR® IOL subjects and 172 Model MA60BM monofocal IOL subjects. Demographically, these studies consisted of 65.3% female and 34.7% male subjects. Statified by race, subjects were 93.9% Caucasian, 2.6% Black, 0.9% Asian, and 2.5% designated "Other." The mean age for the total study population was 68.8 years.

### Summary of Driving Sub-study

Night driving performance was tested using the NDS (Night Driving Simulator), developed and validated by Vision Sciences Research Corp., in bilaterally implanted subjects (23 subjects implanted with ReSTOR® IOL Model MA60D3 and 25 subjects implanted with monofocal control Model MA60BM). Night driving performance was tested to determine visibility distances for the detection and identification of road warning signs, message signs, and road hazards under various conditions (clear [normal], inclement weather [fog], and glare conditions). The simulated driving scenes using the NDS (Night Driving Simulator) were a city street at night with streetlights and a rural highway with low beam headlights. It is important to realize that there are no absolute detection and identification distances for all targets to determine safety and efficacy. Actual visibility distances, excluding individual differences, will depend upon the target size, contrast (sign age, clean or dirty sign), background clutter (oncoming vehicle headlights, street and store lights) and vehicle headlight condition (low or high beams, clean or dirty lens). The NDS was designed to provide similar visibility distances to that of similar targets reported in the literature. One could use other targets in the real world and obtain other visibility distances; however,

those distances would be relevant only for the conditions noted above, such as age and condition of the target, and would change over time. Therefore, safety and efficacy analysis can only be based on relative differences between the lenses, not absolute values. Visibility distance values could be biased to allow a very large difference between lenses to satisfy stopping distance requirements by making the simulator targets visible at very large distances or, conversely, visibility distance values could be biased to allow a very small difference between lenses to satisfy stopping distance requirements by making the simulator targets visible at very small distances. With this in mind, further analysis uses the actual target visibility distance examples first reported in the validation study literature for the NDS.

The ability of subjects implanted with ReSTOR® IOL Models MA60D3 and SA60D3 to detect and identify road signs and hazards at night was similar to that of subjects implanted with the monofocal control Model MA60BM under normal visibility driving conditions.

# Sign Identification

## Rural Driving Conditions

The mean visibility distances, standard deviations, and percentage differences between monofocal (Model MA60BM) subjects and ReSTOR® IOL (Model MA60D3) subjects for sign identification under normal, fog, and glare conditions in the rural scene are shown in Table 11.

Both fog and glare are seen to cause larger differences in performance between the monofocal subjects and the ReSTOR® IOL Model MA60D3 subjects than the clear night condition. However, in all instances the mean differences were less than 15%.

Identification Distance (feet)		Le	ens		
		Monofocal Control IOL Model Model MA60D3		Difference	% Loss over Control
Visibility Condition	Targets				
Nerrel	Text	249 ± 57	230 ± 41	19	7.5 %
Normai	Warning	523 ± 68	476 ± 81	47	8.9 %
Fee	Text	248 ± 42	215 ± 50	33	13.4 %
FOg	Warning	512 ± 89	453 ± 88	60	11.6 %
Glare	Text	228 ± 56	195 ± 52	33	14.1 %
	Warning	512 ± 89	448 ± 83	64	12.5 %

### City Driving Conditions

The mean visibility distances, standard deviations, and percentage differences between monofocal (Model MA60BM) subjects and ReSTOR® IOL (Model MA60D3) subjects for sign identification under normal, fog, and glare conditions in the city scene are shown in Table 12.

Under glare conditions, the ability of the ReSTOR® IOL Model MA60D3 subjects to identify the text sign was reduced on average by 28%; however, there was only a small difference under these conditions for the warning sign.

Table 12: Sign Identification Distances in City Scene	
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		Le	ens			
Identification Distance (feet)		Monofocal Control IOL Model MA60BM ReSTOR® IOL Model MA60D3		Difference	% Loss Over Control	
Visibility Condition	Targets					
Marral	Text	160 ± 30	143 ± 31	17	10.8 %	
Normai	Warning	211 ± 26	201 ± 25	10	4.7 %	
Een	Text	159 ± 24	138 ± 34	21	13.2 %	
rog	Warning	208 ± 23	184 ± 31	24	11.7 %	
Glara	Text	142 ± 33	102 ± 46	40	28 %	
Giare	Warning	194 ± 26	170 ± 28	24	12.5 %	

# Detecting Hazards

### Rural Conditions

The mean visibility distances, standard deviations, and percentage differences between monofocal (Model MA60BM) subjects and ReSTOR® IOL (Model MA60D3) subjects for hazard detection under normal, fog, and glare conditions in the rural scene are shown in Table 13. In rural conditions, all differences for detecting hazards were less than 20%.

### Table 13: Hazard Detection Distances in Rural Scene

	Le	ens		% Loss Over Control	
Detection Distance (feet)	Monofocal Control IOL Model MA60BM	ReSTOR® IOL Model MA60D3	Difference		
Visibility Condition					
Normal	511 ± 80	474 ± 87	37	7.2 %	
Fog	507 ± 92	465 ± 101	42	8.5 %	
Glare	480 ± 98	386 ± 150	94	19.7 %	

### City Conditions

The mean hazard detection, standard deviations, and percentage differences for control (Model MA60BM) subjects and ReSTOR® IOL (Model MA60D3) subjects for hazard detection under normal, fog, and glare conditions in the city scene are shown in Table 14. For city conditions, in all instances the mean differences were less than 15%.

Table 14: Hazard	Detection Distances	in City	Scene
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	Le	ens			
Detection Distance (feet)	Monofocal Control IOL Model MA60BM	ReSTOR® IOL Model MA60D3	Difference	% Loss Over Control	
Visibility Condition					
Normal	200 ± 52	183 ± 38	17	8.5 %	
Fog	229 ± 66	211 ± 65	18	7.9 %	
Glare	190 ± 67	166 ± 48	24	12.6 %	

### Retinal Detail

No difficulties in retinal treatment were encountered by any investigator in the study. However, one investigator had 20 reports of loss of retinal detail (i.e., the fundus appeared more anterior).

### Adverse Events

The incidences of cumulative adverse events for the ReSTOR® IOL as compared to the FDA historical grid rates are provided in Table 15. A single occurrence of retinal detachment/repair, single occurrence of pupillary block, and surgical reinterventions exceeded the FDA Grid rate. No occurrences of persistent adverse events (adverse events in the FDA grid that are observed at the 12 month postoperative visit) were observed in any patients implanted with the ReSTOR® IOL.

	ReSTOR® MA60D3 (N=440)		ReSTOR® SA60D3 (N=126)		FDA Grid rate*
	N	%	N	%	%
Cumulative Adverse Events					
Endophthalmitis	0	0.0	0	0.0	0.1
Macular Edema	12	2.7	1	0.8	3.0
Retinal Detachment/Repair	0	0.0	1	0.8	0.3
Hyphema	0	0.0	0	0.0	2.2
Pupillary block	1	0.2	0	0.0	0.1
Lens Dislocation	0	0.0	0	0.0	0.1
Surgical reintervention	10	2.3	2	1.6	0.8
IOL replacement for biometry error	2	0.5	0	0.0	NA
IOL replacement for incorrect power/ operating room error	2	0.5	0	0.0	NA
IOL replacement for visual disturbance	1	0.2	0	0.0	NA
IOL replacement for decentered IOL due to trauma	1	0.2	0	0.0	NA
IOL replacement due to patient dissatisfaction	0	0.0	1	0.8	NA
Laser treatment	3	0.7	1	0.8	NA
Fibrin removal	1	0.2	0	0.0	NA
Persistent Adverse Events:					
Macular Edema	0	0.0	0	0.0	0.5
Raised IOP Requiring Treatment	0	0.0	0	0.0	0.4
Corneal Edema	0	0.0	0	0.0	0.3
Iritis		0.0	0	0.0	0.3

Table 15: ReSTOR® IOI	versus FDA Historica	al Grid E	irst Eve – Safetv
Table 13. Nearono loc	VELSUS L DA HISTORICO	a onu, r	inst Lye – Jaiety

\*FDA draft guidance on Monofocal Intraocular Lenses, Annex B (October 14, 1999)

Visual Disturbances With the exception of blurred near vision and problems with color perception, the monofocal control patients had a lower rate of severe observations than the ReSTOR® IOL patients (Table 16). Of the 440 subjects implanted with ReSTOR® IOL Model MA60D3 and 126 subjects implanted with Model SA60D3, one subject implanted with ReSTOR® IOL Model MA60D3 required lens explantation due to visual disturbances.

Table 16: Visual Disturbances, 6 Months Postoperative
(Following second eye implantation)

Visual Disturbanco	ReSTOR® Model MA60D3		ReSTOR® Model SA60D3		Monofocal Control	
visual Disturbance	% Moderate	% Severe	% Moderate	% Severe	% Moderate	% Severe
Glare/Flare	20.1	4.9	23.2	4.3	7.1	1.9
Problems with Night Vision	8.5	4.1	10.1	2.9	3.8	1.9
Halos	18.0	4.4	23.2	7.2	1.9	1.3
Distorted Near Vision	0.8	0.8	0.0	0.0	0.6	0.0
Distorted Far Vision	1.0	0.3	0.0	0.0	0.6	0.0
Blurred Near Vision	5.9	0.8	7.2	0.0	12.8	3.8
Blurred Far Vision	5.9	1.0	5.8	0.0	3.2	0.6
Double Vision in both eyes	1.5	0.8	1.4	0.0	1.3	0.0
Problems with Color Perception	0.5	0.0	0.0	0.0	0.0	0.0

# HOW SUPPLIED

These apodized diffractive optic posterior chamber intraocular lenses are supplied dry, in a package terminally sterilized with ethylene oxide. They must be opened only under aseptic conditions (see DIRECTIONS FOR USE section).

### EXPIRATION DATE

Sterility is guaranteed until the pouch is damaged or opened. The expiration date is clearly indicated on the outside of the lens package. Any lens held after the expiration date should be returned to Alcon Laboratories, Inc. (see RETURNED GOODS POLICY).

### RETURNED GOODS POLICY

In the United States, returned lenses will only be accepted in exchange for other products, not credit. All returns must be accompanied by an Alcon Laboratories, Inc., Returned Goods Number should be shipped via traceable means. A Returned Goods Number is obtained by contacting Alcon Laboratories, Inc., Customer Service Department. Issuance of this number does not constitute final acceptance of the returned products. For detailed policy guidelines including exchange, please contact your Sales or Customer Service Representative. Outside the United States, contact your Local Alcon Laboratories, Inc., office or distributors regarding the Returned Goods

Policy.

### REFERENCE

Boettner EA, Wolter JR. Transmission of the ocular media. Invest Ophthalmol Vis Sci. 1962;1(6):776-83.

# SYMBOLS USED ON LABELING

SYMBOL	ENGLISH		
IOL	Intraocular lens		
PC	Posterior chamber		
PCL	Posterior chamber lens		
UV	Ultraviolet		
D	Diopter		
Øs	Body diameter (Optic diameter)		
Ø <sub>7</sub>	Overall diameter (Overall length)		
8	Do not reuse		
	Use by		
STERILE EO	Sterilized by ethylene oxide		
SN	Serial Number		
<b>A</b>	Attention: See instructions for use		
	Manufacturer		
113 % 45 ℃	Upper Limit of Temperature		

# •••

Alcon Laboratories, Inc. 6201 South Freeway Fort Worth, Texas 76134-2099 USA

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