# // ZEISS CATARACT SUITE Experts agree: The clear choice.

Tap a device for more information





### Swipe to see why ZEISS is the clear choice for cataract surgery

Join us in Boston for a special

### ASCRS event: Maximizing your Toric IOL Practice

### Click here to register







## Superior workflow

### // ZEISS CATARACT SUITE MADE BY ZEISS

Designed to work together from the outset, the ZEISS Cataract Suite provides clearly significant workflow benefits that result in very real gains in efficiency, speed



### and precision during surgery.



#### Swipe down to learn more about the components of the Cataract Suite



# // ZEISS CATARACT SUITE

#### Tap a device for more information















## IOLMaster<sup>®</sup> 500

#### Tap a device for more information







### It starts with precision toric measurements

The ZEISS IOLMaster 500 is the gold standard in optical biometry with more than 100 million successful IOL power calculations to date. With the ZEISS IOLMaster 500 you get cutting-edge measurement technology that leads the way to



### the future of optical biometry.





# CALLISTO eye®

#### Tap a device for more information







### The next step is toric IOL alignment and positioning

CALLISTO eye projects visual guides into the eyepieces of the OPMI LUMERA 700, enabling you to see the exact size, shape and placement of surgical incisions and for the first time, take into account the patient's true visual axis when centrating and









## OPMI LUMERA® 700

#### Tap a device for more information







### It all comes together with precision visualization in the operating room

Incorporating the latest technologies from ZEISS into a modular design, the OPMI LUMERA 700 represents the pinnacle of ophthalmic surgical visualization for both anterior and posterior segment surgeries.









# Surgical precision

Real world results

# Refractive Outcomes - 1 Mo. Post-Op

% of Patients ≤ 0.50 D of Absolute Refraction

100%



Swipe this way for more content

Preliminary data suggests the ZEISS Cataract Suite with CALLISTO eye provides better outcomes than the theoretical best without intraoperative assistance<sup>1</sup> and comparable

### refractive outcomes as intraoperative aberrometry.<sup>2,3</sup>

<sup>1</sup> http://www.doctor-hill.com/IOLmain
<sup>2</sup> http://http://getorasystem.com/ora-data/
<sup>3</sup> Preliminary data from Jonathan Solomon, M.D., Solomon Eye Associates (Bowie, MD), n = 15







# Surgical precision

#### Real world results

## Prediction Error - 1 Mo. Post-Op

% of Patients Within x D of the Intended Refraction



Swipe this way for more content

Preliminary data suggests the ZEISS Cataract Suite with CALLISTO eye provides comparable refractive outcomes and predictive as intraoperative aberrometry.<sup>2,3</sup>









# Surgical precision

Real world results

# **Average Error in Toric IOL Alignment**

**ZEISS Cataract Suite vs. Without Intraoperative Assistance** 

With ZEISS Cataract Suite

Within 2.88°±2.76 from ideal target axis<sup>1</sup> Without Intraoperative Assistance

Within 5.94°±10.67 from ideal target axis<sup>1</sup>



Preliminary data suggests the ZEISS Cataract Suite with CALLISTO eye provides more accurate and precise alignment of toric IOLs than without intraoperative assistance.<sup>1</sup>

### <sup>1</sup> Lackerbauer, C. Modern Solutions for Refractive Cataract Surgery: CALLISTO eye. *Cataract & Refractive Surgery Today*. February 2013;20–27.







## IOLMaster® 500



Find out why the IOLMaster is an excellent choice for toric lens calculations

The IOLMaster and determining toric IOL Power Mark A. Bullimore, MCOptom, PhD, FAAO



The IOLMaster and determining toric power

We make it visible

Agreement between a partial coherence interferometer and 2 manual keratometers

### Tap the icons below to see why the IOLMaster is the gold standard for biometry









(Dubin, CA) recently adhened a new innovation that brings		required a large data set of several numbered cases from a				
the Holladay 2 formula directly into the IOLMaster device, an		surgeon in order to be "optimized," and further optimi-				
upgradable feature that is designed to further improve out-		zation required the use of an excel spreadsheet. (Note: in				
comes with added convenience to the sur	with added convenience to the surgeon and increased		2010, Carl Zeiss' release of the IOLMaster 500 included			
workflow. SM2 Strategic was asked to pro	wide a historical per-	optimization of the Haigis formula within the device,				
spective on the evolution of IOL formu-			reducing the number of cases to			
las, which was accomplished through a	Figure 1: Relative Importance of		50 that a surgeon needed to input			
review of the literature and an interview	Variables Affectir	ng IOL Calculation	in order to effectively use the for-			
with Jack Holladay, MD, well-known as	(From Worldwide St	tudy of 34,000 Eyes)	mula).			
a surgical innovator, optics expert, and			In 1993, Dr. Holladay led a			
developer of today's leading Holladay 2	1. Axial Length 100		worldwide study involving 34 cata-			
formula.	2. Average K	76	ract surgeons to determine which			
	3. Horizontal WTW	24	d of seven variables were relevant as			
HIStory of IOL Formulas	4. Refraction 18		predictors of effective lens position.			
The theoretical basis for today's	6 Antonias Chamber Death 8		In addition to axial length (now			
advanced IOL power calculations	5. Antenor Chamber Depin 8		measured optically) and K readings,			
were first developed over 100 years	6. Lens Thickness 7		data were collected on horizontal			
ago, and for decades surgeons	7. Age 1		white-to-white (WTW), refraction,			
worked with an assumed anterior	Source: Jack Holladay, M.D.		ACD, lens thickness, and patient			
chamber depth (ACD) of 4.5 mm.			age at time of surgery. Because of			
The original first-generation formulas of the early 1980s, the 2% incidence in the population of short eyes, a large						
such as Binkhorst 2, are best described	l as "single vari-	data set of from 34,000 eyes was collected and analyzed				
able" formulas that used biometric me	easurement of axial	to determine relative significance of each variable, as				
length in its calculations. In 1988, the Holladay 1 for-						
mula added keratometry to offer the f	irst "two variable"	zontal white-to-white measurements emerged as the next				
formula, which helped improve accuracy in short and		most important variable relate to ELP after axial length				
long eyes. Over time, more robust diagnostic measure-		and Ks," remarked Dr. Holladay. "We also proved that				
ment of ocular structures has allowed for more refined		there is almost no correlation between axial length and				
formulas to be developed. "The only difference between		size of the anterior segment in 80-90% of eyes."				
today and older formulas," remarked Dr. Holladay, "is		The results from this study led to the release of				
how we predict the effective lens position (ELP)."		Holladay 2 formula and an easy-to-use program that				
Indeed, the third-generation formulas such as		allowed for data entry of the new variables and instant				
Holladay 1, Hoffer Q, and SRK-T each had their		calculation of ELP and the appropriate IOL power selec-				
strengths and weaknesses and became segmented for		tion. It also led to a new paradigm of evaluating eyes by				
use with the specific eye type (short, n	redium or long) of	both their axial length (short, normal, long) and their				
which each was best-suited. These for	mulas assumed that	anterior segment size (small, normal, large). In essence,				

	correction (PRK and LASIK).		Mean Deviation # -0.11D	available at several websites.		
	Surgeons must contend with	94.1	(+/-0.35D, N = 40)	Mainin-I		
	growing expectations by cataract	- 12				
	patients, with a growing percent-	ž.	THY of Balance and 0.250	German Protessor		
	age or mem having undergone			woitgang Haigis, author of		
	laser vision correction at an	2 B 1		the standard Haigis formula,		
	eanier stage of inte. Can Zeiss	že		helped overcome the limita-		
	the Mainin L formula successful	<sup>4</sup> 4	83% of Patients = +/- 0.50D	tions by creating a formula		
	ine Hagis's formula available	2		specifically designed for eyes		
	SM0 Strategie to integrine and			inat nave nad LPGIK of FKK		
	Sw2 Shalegic to interview and	5 5 5 5 5 5	5. 5. 5. 5. 5.	(note: the formula does not		
	Mainia L of Mitchell Jackson MD	03644	0 0 0 3 0	apply to KK, as post-KK eyes		
	a refractive cataract surgeon in	Aprenda ingenation of	arge mation	relationship between anterior		
	Chicago Winoir			and posterior corneal cur-		
	Crincago, minora.	"Besides being an optin	nized formula for LASIK	vature where both are flat-		
	Solving a Problem	and PRK eyes, the ad	lvantage of Haigis-L is	tened as a result of peripheral		
	In the United States, 9-10	one of communication	caning time both before	weakening). Known as the		
	million people (17-19 million	one of convenience in saving time boin before		Haigis-L, this formula has		
	eyes) have undergone some	surgery (reduced planning) and after surgery		been available since 20062		
	form of laser vision correction	(dealing with refractive surprises)"		and is now included as stan-		
	since its approval as a com-			dard (along with Holladay 2)		
	mercial treatment in late 19951. W	orldwide estimates of	within the IOLMaster 500 u	nit.		
	procedure rates range from 2 to 4	times this amount. While	The Haigis-L formula rea	noves the relationship between		
formulas such as Holladay 2 for IOL calculation in cataract corneal power				ative effective lens position		
	surgery have served to significantl	(ELP), instead using the mea	sured anterior chamber depth			
	predict outcomes, none of these for	ermulas were designed to	to predict ELP. All necessary measurements are taken on			
	take into account corneas that have been altered due to cor-		the IOLMaster; no clinical history or CL over-refraction is			
	neal refractive surgery. Because these formulas use corneal		required. The only other information needed is whether the			
	power as part of their calculations	, they won't be accurate	patient had myopic or hyper	opic LVC.		
	unless modified to account for the	change.	Majoin-L in Practice			
	Several alternatives have emerg	ed to help surgeons. The	B ILLI I ILLI LA LARRA INDU			
	Masket Regression method as put	Masket Regression method as published in JCRS in 2006		bestues being an optimized formula for LASIK and PKK		
	estimates a 1D adjustment in IOL power for every 3D of		eyes, the advantage of Haigis-L is one of convenience in			
	This method can be utilized on us	prior to cataract surgery.	saving time both before surgery (reduced planning) and after curpary (dealing with refractive surprises)). Mitchell			
	still requires knowledge of the pre-	J ASIK refractive error	lackson's practice, located in suburban Chicago, is a com-			
	ten require monthly of the free		junior o primer, result in calculation calculage, is a com-			

#### Cataract Penetration









## CALLISTO eye®



Find out why CALLISTO eye enables you to more precisely align toric IOLs











### Increasing Accuracy of Toric IOL Implantation

### More Precise Rhexis Size With CALLISTO eye

### Request the Cataract Suite Brochure





Dr. Oliver Findl









## CALLISTO eye®



Find out why CALLISTO eye enables you to more precisely align toric IOLs











### Increasing Accuracy of Toric IOL Implantation

### More Precise Rhexis Size With CALLISTO eye

Request the Cataract Suite Brochure

### Hear how the ZEISS Cataract Suite helps Dr. Oliver Findl meet the high expectations of today's cataract surgery patients.



Dr. Oliver Findl



Tap video to play





## **OPMI LUMERA® 700**



# Find out why the OPMI Lumera is the microscope preferred by surgeons









the dimerences between microscopes, light sources and accessones. Impressive marketing may lead to confusion regarding the real-world application of new market entries.

The ophthalmic microscope is the most essential piece of equipment fo

intraocular surgery. Saving expenses by selecting an inferior microscope will create long-term problems given the trend toward ever smaller, minimally invasive procedures. However, many ophthalmologists are unfamiliar with

At the UPMC Eye Center, comprehensive experience with minimally invasive glaucoma surgery (MIGS) has highlighted the impact of superior optics and light sources: MIGS could simply not be performed properly in a few older ORs equipped with average halogen microscopes. It is crucial that surgeons are intimately familiar with the technology and can effectively communicate features and advantages to make this expensive investment.



Improving the Red Reflex and Surgical Outcomes with the LUMERA Microscope

42% Decrease In Vitreous Loss Rates With OPMI LUMERA See What UPMC Found Compelling About The OPMI LUMERA 700





Dr. Jason Jones



