



Press Release

Recent studies have shown new cataract technologies from ZEISS achieve excellent refractive outcomes and a reduced risk of refractive surprises

ZEISS Cataract Suite markerless has shown in recent clinical studies to support surgeons in achieving excellent refractive outcomes with post-operative refractive cylinder within +/- 0.50D (diopters) for up to 99% of patients¹. ZEISS IOLMaster[®] 700 with SWEPT Source Biometry[™] improves cataract workflow and has shown a cataract penetration greater than 99%² resulting in 92% fewer ultrasound cases³ leading to a reduced risk of refractive surprises and allowing surgeons to treat more patients with better technology³. ZEISS Cataract Suite markerless and IOLMaster 700 from ZEISS are being presented during the 2016 American Society of Cataract & Refractive Surgery (ASCRS) Annual Symposium & Congress May 7 – 9 in New Orleans.

Additionally, the company reports on the minimally invasive refractive laser vision correction procedure SMILE. More than 450,000 procedures have been successfully performed by over 800 surgeons in 61 countries outside the US. The VisuMax[®] IDE study of the SMILE procedure for Spherical Myopia is under review by the US FDA; enrollment is nearly completed for Astigmatic Myopia.

For comprehensive care, the company announces expanded applications for ZEISS CIRRUS[™] OCT: Wide Field of View OCT Angiography for retina care; GPA[™] with Ganglion Cell Progression Analysis for glaucoma management.

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Excellent refractive outcomes and a reduced risk of refractive surprises with cataract surgery innovations from ZEISS

Recent clinical studies show excellent refractive outcomes by surgeons using ZEISS Cataract Suite markerless¹. The integrated platform from ZEISS brings together the new IOLMaster 700 SWEPT Source Biometer, or the IOLMaster 500, with OPMI LUMERA[®] surgical microscopes, the CALLISTO eye[®] computer-assisted cataract surgery system and the FORUM[®] data management system. ZEISS Cataract Suite markerless allows surgeons to skip the traditional time-consuming manual pre-operative and intraoperative marking of the corneal surface and to precisely and efficiently align toric IOLs for optimal patient outcomes.

"I can better predict the refractive outcome of my patients with markerless toric IOL alignment from ZEISS. With the markerless system more than 99% of my patients have a postoperative refractive cylinder within ± 0.50 D¹," states Dr. Daniel Black from the Sunshine Eye Clinic, Birtinya Australia.

Not only have surgeons found ZEISS Cataract Suite markerless to be more precise than manual marking, but are achieving better results than with other intraoperative guidance systems. Dr. Jonathan D. Solomon



of the Bowie Vision Institute in the US states, "Using pre-operative diagnostics more than doubles the percentage of patients achieving post-operative refractive cylinder within $\pm 0.25D$ compared to intra-operative aberrometry."

Astigmatism planning and precise alignment of toric IOLs starts with excellent biometry. At this first critical step, the ZEISS IOLMaster 700 SWEPT Source Biometer, with full-length OCT imaging from the cornea to the fovea, helps surgeons to see and verify their biometry measurements reducing the risk of refractive surprises and to better identify irregular eye geometries for better patient selection*. The new ZEISS IOLMaster 700 integrates keratometry, biometry, imaging and a reference image for markerless toric IOL alignment in one device.

Most recent studies have shown that the ZEISS IOLMaster 700 improves cataract workflow with a cataract penetration greater than 99%² resulting in 92% fewer ultrasound cases³ leading to a reduced risk of refractive surprises and allowing surgeons to treat more patients with better technology³. Dr. Hirschschall from the Hanusch Hospital in Vienna reports, "With the IOLMaster 700, we have gone from one or two ultrasound cases a day to one every 2-3 weeks."

"We have designed the ZEISS Cataract Suite markerless to simplify the toric IOL implantation and alignment workflow for greater efficiency and precision so surgeons can achieve the best possible outcomes for every patient. These recent studies further validate how our innovations support cataract surgeons deliver excellent outcomes and meet the high expectations of patients for optimal vision after surgery," says Dr. Ludwin Monz, President and CEO of Carl Zeiss Meditec AG.

Minimally invasive corneal refractive procedure rapidly becoming established as 3rd Generation Laser Vision Correction

The SMILE procedure, introduced by ZEISS in 2011 in Europe and other markets, is rapidly becoming established as the 3rd generation of laser vision correction in addition to PRK and LASIK with more than 450,000 eyes successfully treated. More than 400 international clinics and practices and over 800 refractive surgeons are performing SMILE and offering this clinical procedure to their patients. SMILE is the first, and to date, only minimally invasive procedure for refractive laser correction.

Clinical study data to establish safety and effectiveness of the SMILE procedure for Spherical Myopia using the ZEISS VisuMax[®] femtosecond laser is currently under review by the US FDA. 336 patients have been treated across five US study sites within this trial. In a second clinical trial for Astigmatic Myopia enrollment is nearly completed. Over 300 patients have already been treated.

"SMILE is growing quickly in popularity with surgeons outside of the US and enjoying steep increase in annual procedure numbers. Patients are attracted by the fact that the procedure is minimally invasive and does not require a flap," stated Dr. Monz. "ZEISS is working closely with FDA to gain US approval for this exciting new refractive procedure."

Expanded Applications for Retina Care and Glaucoma Management for ZEISS CIRRUS OCT

Wide Field of View for ZEISS AngioPlex OCT Angiography

The new ZEISS AngioPlex[™] OCT Angiography makes it quick and easy for doctors to add vessel imaging to their routine exams to help uncover vascular changes associated with retinal disease [e.g. Diabetic Retinopathy (DR) and Dry AMD (Age Related Macular Degeneration)].



AngioPlex OCT Angiography from ZEISS on the ZEISS CIRRUS HD-OCT model 5000 provides ultra clear non-invasive assessment of retinal micro-vasculature. ZEISS AngioPlex OCT Angiography is now available with a new 8X8 mm Wide Field of View, a 77% larger area than the standard 6X6 mm scan, enabling doctors to easily examine the entire macula and surrounding paramacular area in a single image with the option to add detailed assessment with 3x3 or 6x6 scans.

GPA with Ganglion Cell Progression Analysis

New Ganglion Cell Guided Progression Analysis (GPA) on ZEISS CIRRUS HD-OCT enables doctors to assess signs of progression in the macula that may be associated with glaucoma. This new analysis complements the ONH (optic nerve head) & RNFL (retinal nerve fiber layer) GPA and can reveal progression that may not be apparent in the other GPA analyses. With ONH, RNFL and the new Ganglion Cell GPA analyses, doctors have a comprehensive progression assessment for key anatomies known to be affected by glaucoma.

Ganglion Cell GPA is the latest application for glaucoma analysis in the comprehensive portfolio of Glaucoma Solutions from ZEISS of industry-leading technologies and applications for the diagnosis and disease management across both structure & function.

Attendees of the 2016 ASCRS Symposium & Congress can experience the latest innovations for ophthalmology at ZEISS booth #1045 May 7-9, 2016 in New Orleans.

www.zeiss.com/ascrs

1 Black D. Evaluation of markerless alignment system for toric IOLs. Paper presented at: ASCRS/ASOA Annual Symposium & Congress; April 20, 2015; San Diego, CA

2 Clinical data of Dr. Hirschall, Hanusch Clinic Vienna, Austria, based on >1.200 European eyes.

3 Clinical study of Dr. Akman, Evaluation and comparison of the new swept source OCT-based IOLMaster 700 with the IOLMaster 500

**As the ZEISS IOLMaster 700 is clearly not intended to be used for diagnostics, findings need to be verified and pathologies diagnosed with a dedicated retina OCT*

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**Brief profile**

Carl Zeiss Meditec AG (ISIN: DE 0005313704), which is listed on TecDAX of the German stock exchange, is one of the world's leading medical technology companies. The Company supplies innovative technologies and application-oriented solutions designed to help doctors improve the quality of life of their patients. It provides complete packages of solutions for the diagnosis and treatment of eye diseases, including implants and consumable materials. The Company creates innovative visualization solutions in the field of microsurgery. The medical technology portfolio of ZEISS is rounded off by promising future technologies such as intraoperative radiation therapy. With approximately 2,900 employees worldwide, the Group generated revenue of € 1,040 million in financial year 2014/2015 (to 30 September).

The Group's head office is located in Jena, Germany, and it has subsidiaries in Germany and abroad; more than 50 percent of its employees are based in the USA, Japan, Spain and France. The Center for Application and Research (CARIn) in Bangalore, India and the Carl Zeiss Innovations Center for Research and Development in Shanghai, China, strengthen the Company's presence in these rapidly developing economies. Around 35 percent of Carl Zeiss Meditec AG's shares are in free float. The remaining approx. 65 percent are held by Carl Zeiss AG, one of the world's leading companies in the optical and optoelectronic industries.

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