

IOLCon: The roadmap for reliable IOL calculation. New features of modern international internet data-base for updated and optimized IOL constants: The “lens power calculation module”

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Purpose: The Internet database IOLCon (www.iolcon.org), founded in 2017, established itself meanwhile as a reliable, worldwide available source for optimized IOL constants and specifications. Based on modern optimization strategies, IOLCon also offers individually optimized IOL constants free of charge for ophthalmic surgeons. Recently, IOLCon supports ophthalmic surgeons e.g. in selecting the individual IOL by its new "Lens Power Calculation Module" (LPCM).

Methods: Close cooperation with Institute of Experimental Ophthalmology, University Homburg/Saar (Germany).

Results: The method used by IOLCon to optimize IOL constants is characterized as an "intelligent IOL constant optimization strategy", which uses modern nonlinear optimization methods. Optimizations of the constants for the following published formulae can be found on IOLCon: Haigis, Hoffer-Q, Holladay 1, SRK/T-and now also for the new Castrop formula. The prerequisite is the use of current measurement techniques that precisely measure all distances of the eye. IOLCon's newly launched online calculator, LPCM, is based on the Castrop formula, and supports ophthalmic surgeons when selecting the individual IOL power. The calculator is intended to be used for scientific purpose only and in combination with comprehensive eye exams, respective diagnostics and measurements required for patients undergoing cataract surgery.

Conclusions: A modern database for optimized IOL constants and lens specifications that meets the demands of today's cataract surgery is just as urgently needed today as modern online calculation tools that serve as a decision-making aid when selecting the individual IOL power. IOLCon offers both: with its (individually) optimized IOL constants and the online calculation tool "Lens Power Calculation Module", it is an essential instrument for modern cataract surgery and will also meet future demands of ongoing developing ophthalmic surgery.

Joint event

Euro Vaccines 2022

Euro Ophthalmology 2022

Endocrinology 2022

Pediatrics 2022

October 03-04, 2022

Webinar

Biography

Sibylle Scholtz, Biologist, Chemist, PhD in Ophthalmology, International Science Correspondent, Associated Senior Research Fellow (Institute of Experimental Ophthalmology, Saarland University Faculty of Medicine, Germany), longstanding experience in the ophthalmic medical device industry.

Oksana Vitovska, Professor of Ophthalmology at the National Medical University O.O. Bogomolec in Kyiv (Ukraine), from 2014 to 2019 chief physician of the university eye clinic there. She is the Head of the "Ukrainian Alliance of Ophthalmologists", strongly committed to modern, intensive training for young ophthalmologists, currently through webinars. Her scientific focus is on glaucoma, uveitis and biometrics of the eye. In addition, she provides assistance in the care of war-related eye injuries.

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