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Comparison of Multiple IOL Power Calculation Formulas Using Keratometric Data From a Scheimpflug Camera vs. Swept-Source OCT
Vinicius S. De Stefano1, Brent J. Timperley1, Ronald R. Krueger1
1Stanley M. Truhlsen Eye Institute, University of Nebraska Medical Center

**Mentor**: Ronald R. Krueger

**Program**: Ophthalmology

**Type**: Original Research

**Background**: IOL calculation formulas can use multiple different metrics to run their calculations before cataract surgery. The purpose of this study was to analyze the accuracy of multiple intraocular lens power calculation formulas using the IOL Master 700 keratometry (K) and total K (TK) measurements metrics and the Pentacam K and equivalent K readings (EKR).

**Methods**: This was a retrospective analysis of consecutive patients submitted to phacoeulpsisification. Inclusion criteria were patients with good quality scans from both devices on the same day, visual acuity of 20/40 or better at the 1-month postoperative visit, and no surgical complications. Patients with previous surgery, other ophthalmic disorders, and history of eye trauma were excluded. Initial screening identified 45 out of 59 eligible patients. Only one eye per patient was included. Assessment compared the keratometric data among devices and each formula's mean absolute error (MAE) using different keratometric input and patients within 0.25 D, 0.50 D and 1.00 D of the predicted error. Postoperative refraction was assessed at one month postoperatively.

**Results**: Keratometric variables were normally distributed, and a repeated measures ANOVA was found to be statistically significant (p < 0.01). Post-hoc analysis showed a statistical difference between IOL Master K and TK (p < 0.01) and the IOL Master TK and Pentacam EKR (p < 0.01). Regarding the IOL formulas calculation, the EVO IOL Master K performed best (± 0.50 D = 96%, MAE = 0.24 D), followed by the Pearl DGS TK (± 0.50 D = 93%, MAE = 0.21 D) and the Pearl IOL Master K (± 0.50 D = 93%, MAE = 0.26 D).

**Conclusion**: Formula choice should take into consideration which keratometric values are being used. Also, using Pentacam K, especially the EKR, did not improve any formula accuracy. Future analysis will include optimization of A-constants, assessment other IOL types, and stratification of subjects by groups of interest.

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Association Between Mortality and Early Post-operative Ambulation After Distal Femur Fracture Fixation in Elderly Patients
Erin Stockwell1, Matthew Hays1, Nathanael Urban2, Matthew Mormino1, Justin Siebler1, Sara Putnam1
1Department of Orthopaedic Surgery & Rehabilitation, College of Medicine, University of Nebraska Medical Center
2College of Medicine, University of Nebraska Medical Center

**Mentor**: Sara Putnam

**Program**: Orthopaedic Surgery

**Type**: Original Research

**Background**: There has been an increased interest regarding the impact of ambulation on outcomes in elderly patients who sustain lower extremity fractures. This study sought to evaluate the effect of early postoperative ambulation on postoperative mortality in elderly patients who sustained distal femur (DF) fractures.

**Methods**: This is a retrospective review of patients ≥65 years of age who underwent open reduction internal fixation (ORIF) of a DF fracture. Subjects were divided into all-comer and isolated injury cohorts. Both cohorts underwent statistical analysis to evaluate associations between both the modified 5-factor frailty index (mFI-5) and postoperative ambulation with regard to mortality at 30-days and 1-year.

**Results**: Patients who ambulated within the first three postoperative days had an odds ratio of 3.41 of survival at one year compared to those who did not, independent of whether they had 1 or >1 fracture (p=0.028, 95% CI 1.144-10.143); this was statistically significant in both the all-comer (p=0.037) and isolated