

IOL CALCULATIONS FOR CATARACT SURGERY AFTER POST-CORNEAL REFRACTIVE SURGERY: COMPARISON OF BARRETT TRUE-K, BARRETT TRUE-K TK, ASCRS CALCULATOR AND ORA.

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# FINANCIAL DISCLOSURES

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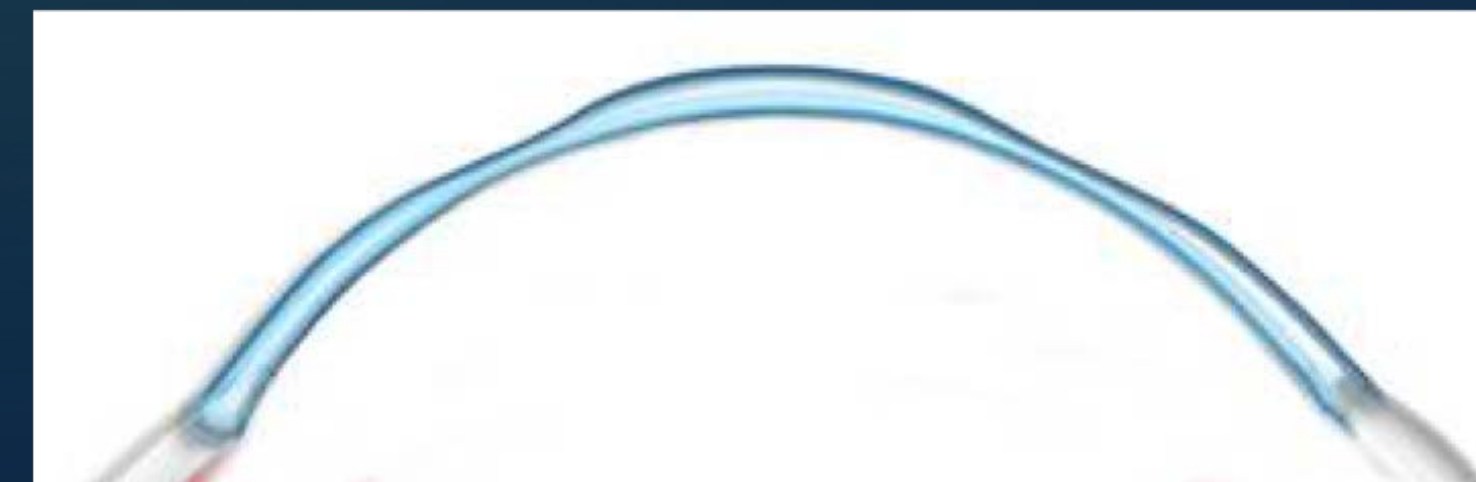
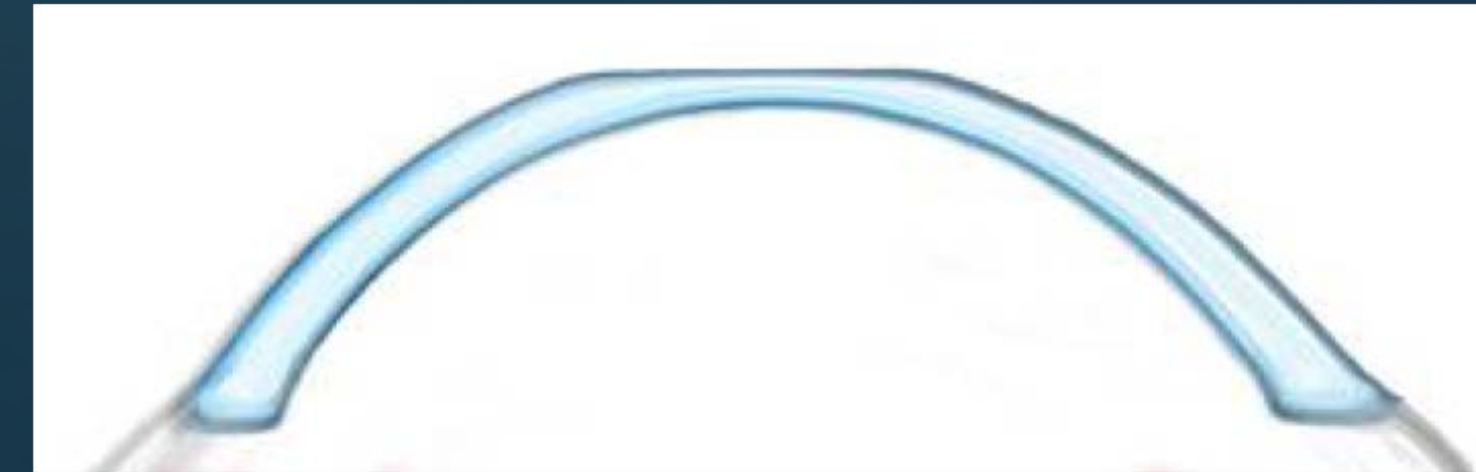
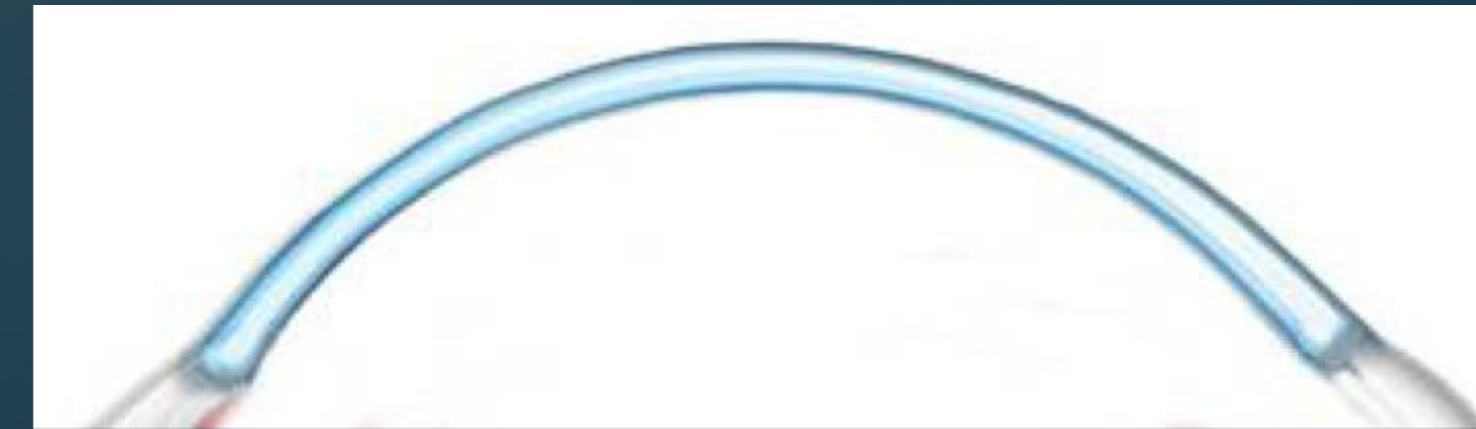
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- ALCON: S, C, RESEARCH GRANT
- J&J: S, C
- CORNEAGEN: S, C, MAB
- OCULAR SCIENCE: C, MAB
- ZEISS: C, S, RESEARCH GRANT
- ORASIS: S, MAB
- OCULAR THERAPEUTIX: S, RESEARCH GRANT

# BACKGROUND

## WHAT'S THE DILEMMA?

- NORMAL CORNEA: 2/3 OF POWER, MOST K MEASUREMENTS ASSUME A -6.0D POSTERIOR CORNEAL CONTRIBUTION
- POST MYOPIC LASIK: THE ANTERIOR CORNEA HAS BEEN MODIFIED AND THE CORNEA IS OVERESTIMATED AND A HYPEROPIC OUTCOME RESULTS
- POST HYPEROPIC LASIK: THE ANTERIOR CORNEA HAS BEEN MODIFIED AND THE CORNEA IS UNDERESTIMATED AND A MYOPIC OUTCOME OCCURS
- SOLUTION: A TOTAL CORNEAL POWER IS OBTAINED TO ASSIST WITH IOL CALCULATIONS



# LITERATURE REVIEW

REVIEW/UPDATE


## Metaanalysis of intraocular lens power calculation after laser refractive surgery in myopic eyes

Xu Chen, MD, Fei Yuan, MD, Lianqun Wu, MD

To evaluate the accuracy of intraocular lens (IOL) power calculation methods after laser refractive surgery in myopic eyes, a comprehensive literature search was carried out for retrospective case series studies with data on post-myopic laser surgery IOL power calculations published from January 2000 to May 2014. A metaanalysis of the 9 identified studies was performed using odds ratios in percentage of prediction error within  $\pm 0.5$  or 1.0 diopter (D) of the target refraction. Compared with the Haigis-L method, the clinical history method, corneal bypass method, and Feiz-Mannis method were associated with lower odds of prediction; the Masket method showed higher odds. The subgroup data showed significantly better performance of the Shammas no-history method with the Shammas post-LASIK formula than the Haigis-L method in prediction error. The Masket method and the Shammas no-history method with the Shammas post-LASIK formula without historical data had more prediction accuracy than the Haigis-L method. The clinical history method, Feiz-Mannis method, and corneal bypass method, which required historical data, were less accurate in their predictions.

**Financial Disclosure:** No author has a financial or proprietary interest in any material or method mentioned.

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 Supplemental material available at [www.jcrsjournal.org](http://www.jcrsjournal.org).

ARTICLE

## Evaluation of intraocular lens power prediction methods using the American Society of Cataract and Refractive Surgeons Post-Keratorefractive Intraocular Lens Power Calculator

Li Wang, MD, PhD, Warren E. Hill, MD, Douglas D. Koch, MD

**PURPOSE:** To evaluate the accuracy of methods of intraocular lens (IOL) power prediction after previous laser in situ keratomileusis (LASIK) or photorefractive keratectomy (PRK) using the American Society of Cataract and Refractive Surgery IOL power calculator.

**SETTING:** Cullen Eye Institute, Baylor College of Medicine, Houston, Texas, and private practice, Mesa, Arizona, USA.

**METHODS:** The following methods were evaluated: methods using pre-LASIK/PRK keratometry (K) and surgically induced change in refraction, methods using surgically induced change in refraction, and methods using no previous data. The predicted IOL power was calculated with each method using the actual refraction after cataract surgery as the target. The IOL prediction error was calculated as the implanted IOL power minus the predicted IOL power. Arithmetic and absolute IOL prediction errors, variances in mean arithmetic IOL prediction error, and percentage of eyes within  $\pm 0.50$  diopter (D) and  $\pm 1.00$  D of refractive prediction errors were calculated.

**RESULTS:** Methods using surgically induced change in refraction or no previous data had significantly smaller mean absolute IOL prediction errors, smaller variances, and a greater percentage of eyes within  $\pm 0.50$  D and  $\pm 1.00$  D of refractive prediction errors than methods using pre-LASIK/PRK keratometry (K) values and surgically induced change in refraction (all  $P < .05$  with Bonferroni correction). There were no statistically significant differences between methods using surgically induced change in refraction and methods using no previous data.

**CONCLUSION:** Methods using surgically induced change in refraction and methods using no previous data gave better results than methods using pre-LASIK/PRK K values and surgically induced change in refraction.

**Financial Disclosure:** No author has a financial or proprietary interest in any material or method mentioned.

*J Cataract Refract Surg* 2010; 36:1466–1473 © 2010 ASCRS and ESCRS

ARTICLE

## Accuracy of the Barrett True-K formula for intraocular lens power prediction after laser in situ keratomileusis or photorefractive keratectomy for myopia



Adi Abulafia, MD, Warren E. Hill, MD, Douglas D. Koch, MD, Li Wang, MD, PhD, Graham D. Barrett, MD

**PURPOSE:** To compare the accuracy of the Barrett True-K formula with other methods available on the American Society of Cataract and Refractive Surgery (ASCRS) post-refractive surgery intraocular lens (IOL) power calculator for the prediction of IOL power after previous myopic laser in situ keratomileusis (LASIK) or photorefractive keratectomy (PRK).

**SETTING:** Cullen Eye Institute, Baylor College of Medicine, Houston, Texas, and private practice, Mesa, Arizona, USA.

**DESIGN:** Retrospective case series.

**METHODS:** The accuracy of the Barrett True-K formula was compared with the Adjusted Atlas (4.0 mm zone), Masket, modified-Masket, Wang-Koch-Maloney, Shammas, and Haigis-L methods to calculate IOL power. A separate analysis of 2 no-history methods (Shammas and Haigis-L) was performed and compared with the Barrett True-K no-history option.

**RESULTS:** Eighty-eight eyes were available for analysis. The Barrett True-K formula had a significantly smaller median absolute refraction prediction error than all other formulas except the Masket, smaller variances compared with the Wang-Koch-Maloney, Shammas, and Haigis-L, and a greater percentage of eyes within  $\pm 0.50$  diopter (D) of predicted error in refraction compared with the Adjusted Atlas, Masket, and modified Masket methods (all  $P < .05$ ). In eyes with no historical data, the Barrett True-K no-history formula had a significantly smaller median absolute refraction prediction error and a greater percentage of eyes within  $\pm 0.50$  D of the predicted error in refraction than the Shammas and the Haigis-L formulas (both  $P < .05$ ).

**CONCLUSION:** The Barrett True-K formula was either equal to or better than alternative methods available on the ASCRS online calculator for predicting IOL power in eyes with previous myopic LASIK or PRK.

**Financial Disclosures:** Dr. Barrett has licensed the Barrett True-K formula to Haag-Streit. Dr. Hill is a paid consultant to Haag-Streit and Alcon Surgical, Inc. None of the other authors has a financial or proprietary interest in any material or method mentioned.

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ONLY WITHIN +/-0.50D 65-74% OF THE TIME!

# CURRENT STRATEGY WITH NO PRIOR DATA

**OD right** Analyze

Eye status: Eye status

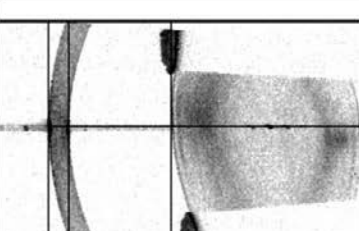
LS: Phakic VS: Vitreous body LVC: LASIK  
Ref: --- VA: ---

Biometric values

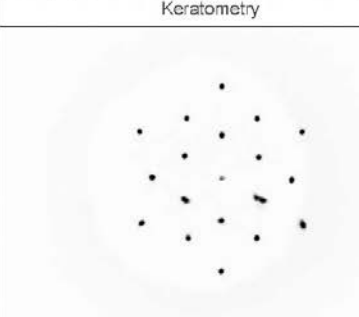
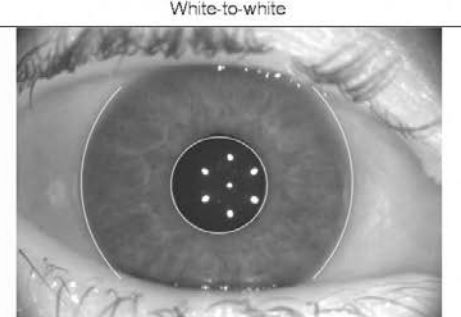
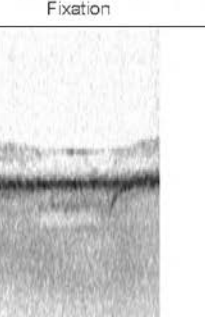
AL: 24.02 mm	SD: 5 µm	WTW: 12.4 mm	lx: +0.6 mm	ly: -0.1 mm
CCT: 490 µm	SD: 2 µm	P: 4.4 mm	CW-Chord: 0.5 mm @ 180°	
ACD: 3.08 mm	SD: 9 µm			
LT: 4.85 mm	SD: 12 µm			

SE: 39.69 D (!) SD: 0.01 D TSE: 39.27 D (!) SD: 0.03 D  
K1: 39.34 D @ 144° SD: 0.01 D TK1: 38.91 D @ 134° SD: 0.03 D  
K2: 40.04 D @ 54° SD: 0.01 D TK2: 39.63 D @ 44° SD: 0.03 D  
ΔK: -0.70 D @ 144° ΔTK: -0.72 D @ 134°

B scan



Keratometry White-to-white Fixation

(!) Borderline value (\*) Value was edited manually --- No value measured

Comment

ZEISS

IOLMaster 700 Version 1.88.1.64861 Report dated 8/25/2020 11:14 AM; created by Administrator Page 1 of 3



**OD right** IOL calculation **OS left**

Eye status: Eye status

LS: Phakic VS: Vitreous body LS: Phakic VS: Vitreous body  
Ref: --- VA: --- Ref: --- VA: ---

LVC: LASIK LVC mode: Myopic LVC: LASIK LVC mode: Myopic  
Target ref: -1.00 D SIA: +0.00 D @ 0° Target ref: plano SIA: +0.00 D @ 0°

Biometric values

AL: 24.02 mm	SD: 5 µm	AL: 24.23 mm	SD: 11 µm
ACD: 3.08 mm	SD: 9 µm	ACD: 3.04 mm	SD: 8 µm
LT: 4.85 mm	SD: 12 µm	LT: 4.91 mm	SD: 23 µm
WTW: 12.4 mm		WTW: 12.5 mm	

SE: 39.69 D (!) SD: 0.01 D K1: 39.34 D @ 144° SE: 38.94 D (!) SD: 0.03 D K1: 38.44 D @ 15°  
ΔK: -0.70 D @ 144° K2: 40.04 D @ 54° ΔK: -1.03 D @ 15° K2: 39.46 D @ 105°  
TSE: 39.27 D (!) SD: 0.03 D TK1: 38.91 D @ 134° TSE: 38.55 D (!) SD: 0.03 D TK1: 38.10 D @ 19°  
ΔTK: -0.72 D @ 134° TK2: 39.63 D @ 44° ΔTK: -0.93 D @ 19° TK2: 39.02 D @ 109°

<b>K</b> Alcon SN60WF	<b>K</b> Alcon SN60WF
- Barrett True-K - LF: +1.88 DF: +5.0	- Barrett True-K - LF: +1.88 DF: +5.0
IOL (D) Ref (D)	IOL (D) Ref (D)
+28.00 -1.78	+27.00 -0.78
+27.50 -1.39	+26.50 -0.40
<b>+27.00 -1.01</b>	<b>+26.00 -0.03</b>
+26.50 -0.63	+25.50 +0.34
+26.00 -0.25	+25.00 +0.71
+25.66 Emmetropia	+25.96 Emmetropia

<b>K</b> AMO Tecnis ZCTxxx	<b>K</b> AMO Tecnis ZCTxxx
- Barrett True-K - LF: +2.04 DF: +4.0	- Barrett True-K - LF: +2.04 DF: +4.0
IOL (D) Ref (D)	IOL (D) Ref (D)
+28.50 -1.87	+27.50 -0.88
+28.00 -1.49	+27.00 -0.51
<b>+27.50 -1.11</b>	<b>+26.50 -0.13</b>
+27.00 -0.73	+26.00 +0.23
+26.50 -0.36	+25.50 +0.59
+26.01 Emmetropia	+26.31 Emmetropia

(!) Borderline value (\*) Value was edited manually --- No value measured

Comment

ZEISS

IOLMaster 700 Version 1.88.1.64861 Report dated 8/28/2020 3:42 PM; created by Administrator Page 1 of 4

9/15/2020 iolcalc.ascrs.org/wbfrmCalculator.aspx

**IOL Calculator for Eyes with Prior Myopic LASIK/PRK**  
(Your data will not be saved. Please print a copy for your record.)

Please enter all data available and press "Calculate"

Doctor Name: \_\_\_\_\_ Patient Name: \_\_\_\_\_ Patient ID: \_\_\_\_\_  
Eye: \_\_\_\_\_ IOL Model: \_\_\_\_\_ Target Ref (D): \_\_\_\_\_

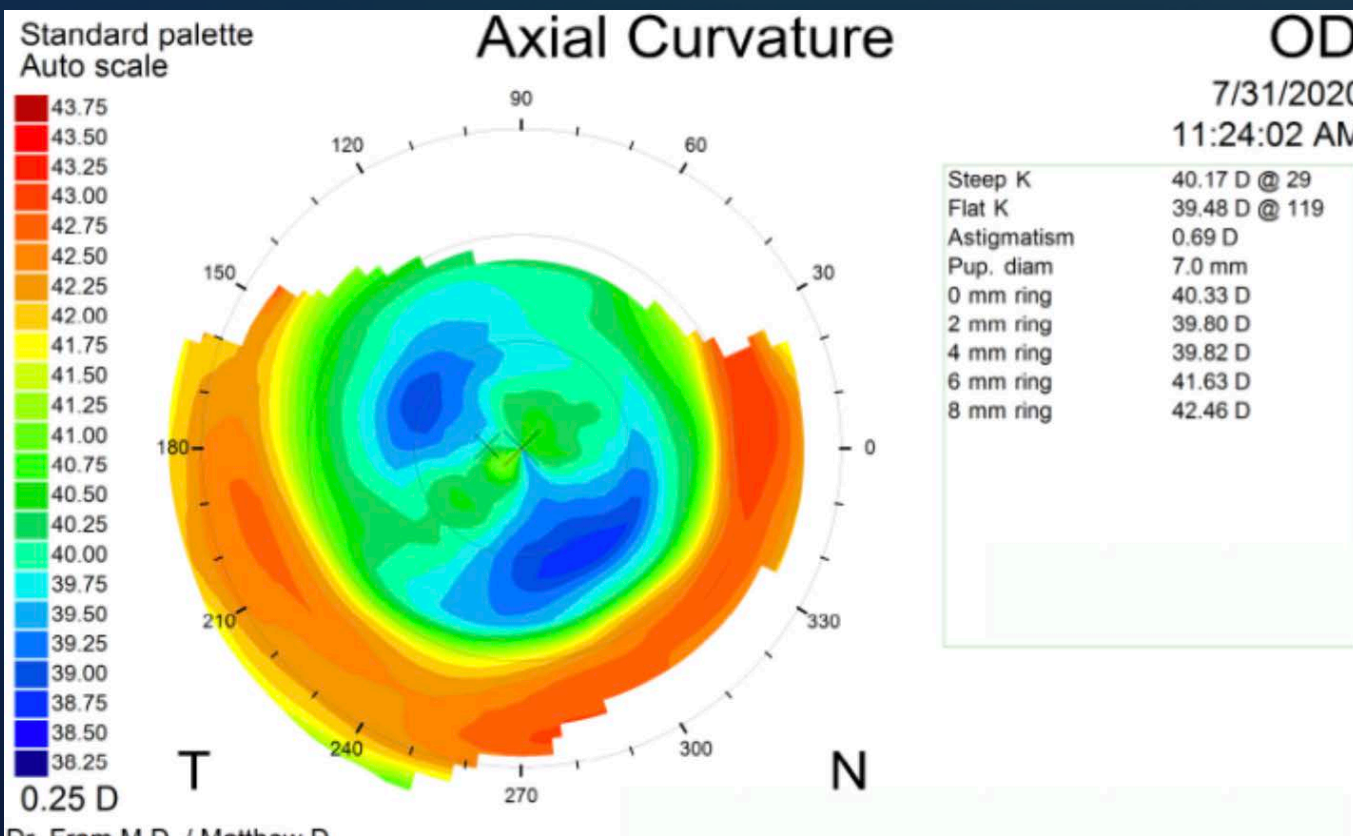
Pre-LASIK/PRK Data:  
Refraction\* Sph(D): \_\_\_\_\_ Cyl(D)\*: \_\_\_\_\_ Vertex (if empty, 12.5 mm is used) \_\_\_\_\_  
Keratometry K1(D): \_\_\_\_\_ K2(D): \_\_\_\_\_

Post-LASIK/PRK Data:  
Refraction\* Sph(D): \_\_\_\_\_ Cyl(D)\*: \_\_\_\_\_ Vertex (if empty, 12.5 mm will be used) \_\_\_\_\_  
Topography EyeSys EffRP: \_\_\_\_\_ Tomey ACCP: \_\_\_\_\_ Galilei TCP2: \_\_\_\_\_  
Nidek ACP/APP: \_\_\_\_\_  
Atlas Zone value Atlas 9000 4mm zone: \_\_\_\_\_ Pentacam TNP\_Apex\_4.0 mm Zone: \_\_\_\_\_  
Atlas Ring Values 0mm: \_\_\_\_\_ 1mm: \_\_\_\_\_ 2mm: \_\_\_\_\_ 3mm: \_\_\_\_\_  
OCT (RTVue or Avanti XR) Net Corneal Power: \_\_\_\_\_ Posterior Corneal Power: \_\_\_\_\_ Central Corneal Thickness: \_\_\_\_\_

Optical/Ultrasound Biometric Data:  
Ks K1(D): \_\_\_\_\_ K2(D): \_\_\_\_\_ Device Keratometric Index (n) 1.3375 1.332 Other: \_\_\_\_\_  
AL(mm): \_\_\_\_\_ ACD(mm): \_\_\_\_\_ Lens Thick (mm): \_\_\_\_\_ WTW (mm): \_\_\_\_\_  
Lens Constants\*\* A-const(SRK/T): \_\_\_\_\_ SF(Holladay1): \_\_\_\_\_  
Haigis a0 (if empty, converted value is used): \_\_\_\_\_ Haigis a1 (if empty, 0.4 is used): \_\_\_\_\_ Haigis a2 (if empty, 0.1 is used): \_\_\_\_\_

\*If entering "Sph(D)", you must enter a value for "Cyl(D)", even if it is zero.  
§Most recent stable refraction prior to development of a cataract.  
# Magellan ACP or OPD-Scan III APP 3-mm manual value (personal communication Stephen D. Klyce, PhD).  
\*\*Enter any constants available; others will be calculated from those entered. If ultrasonic AL is entered, be sure to use your ultrasound lens constants. It is preferable to use optimized a0, a1, and a2 Haigis constants.

Calculate Reset Form



BARRETT TRUE K USING K1 AND K2

ASCRS CALCULATOR

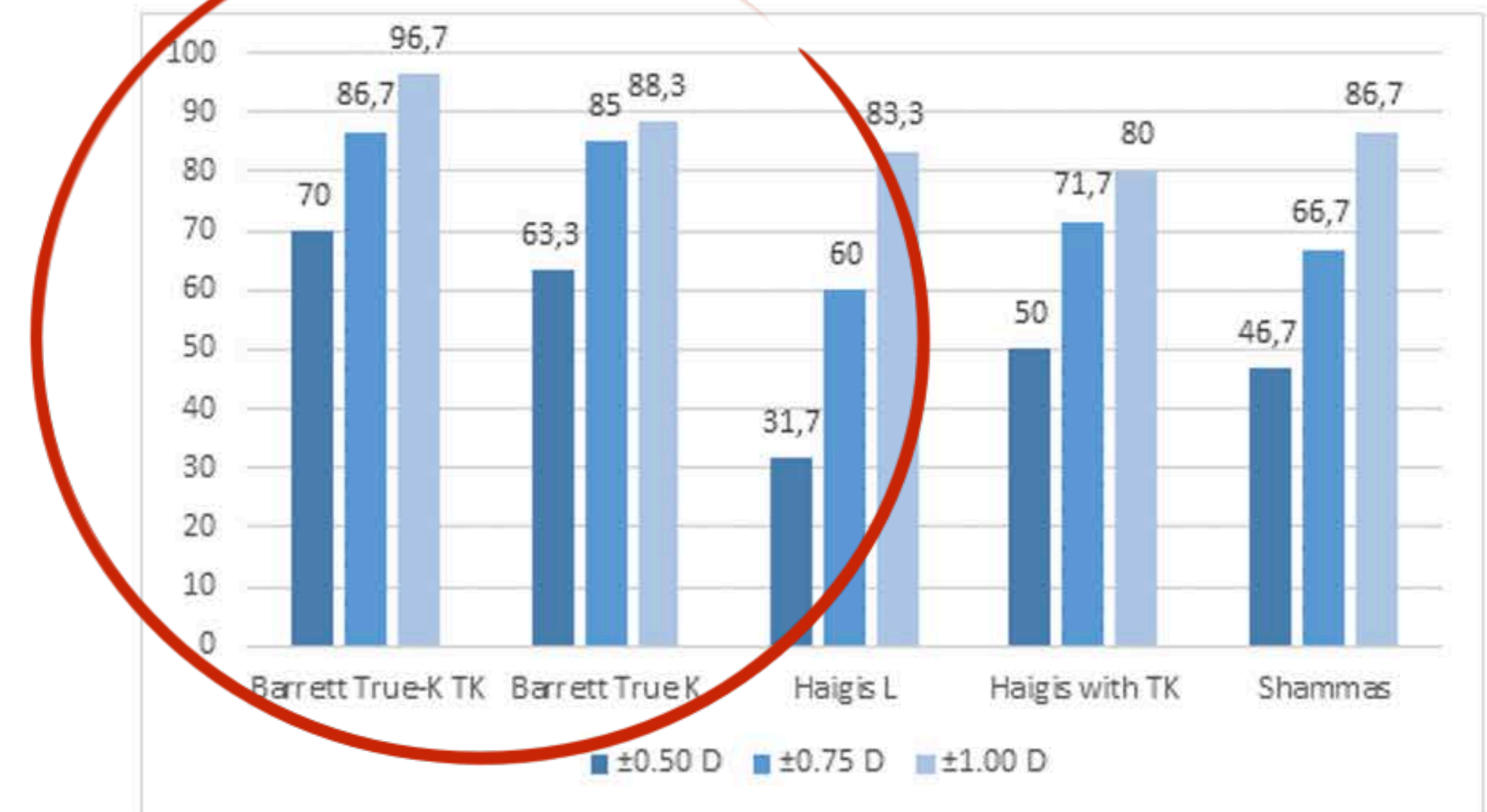
# CAN WE DO BETTER WITH BARRETT TRUE-K TK?

**Graham Barrett**, Perth, Australia; **Michael Lawless**, Sydney, Australia; **Tun Kuan Yeo**, Singapore

**Presentation at ASCRS Annual Meeting 2019, San Diego, USA**

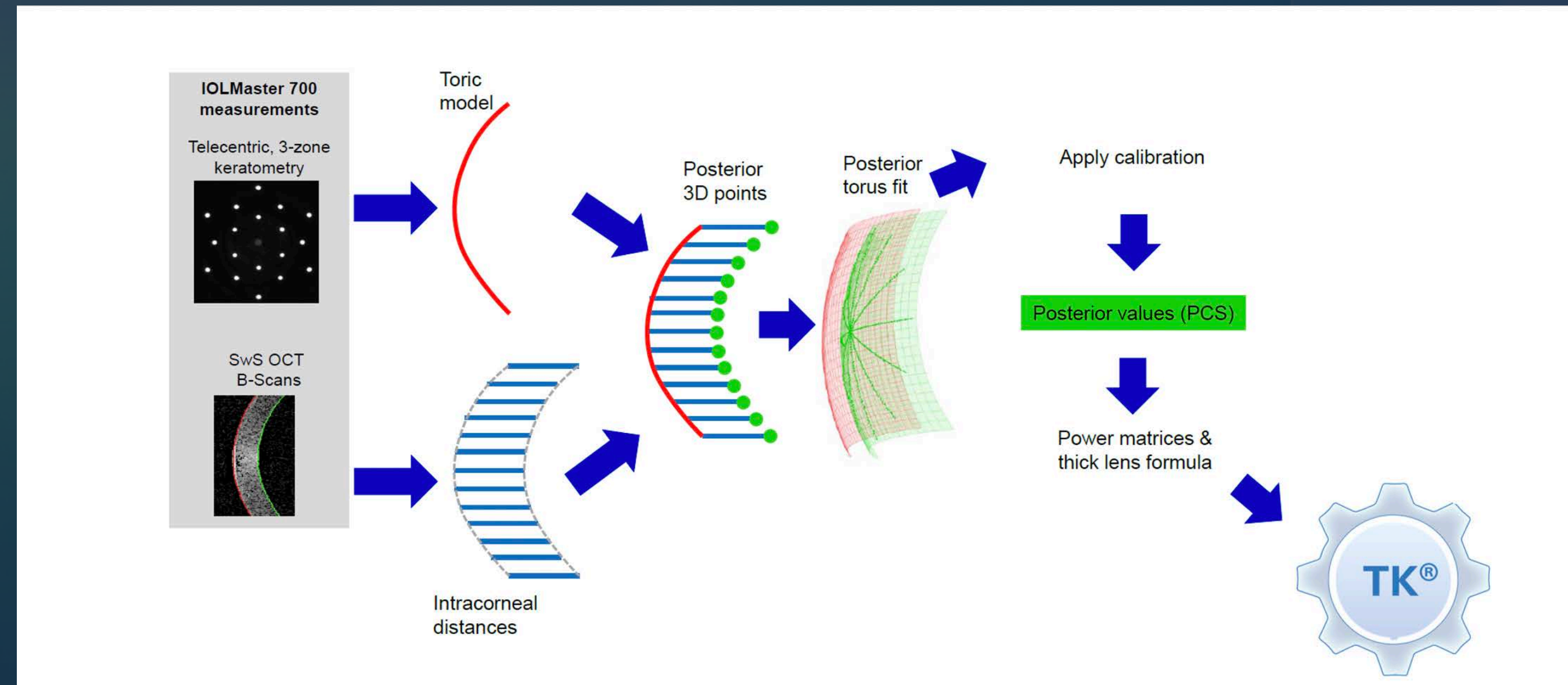
- Retrospective Analysis
- 60 post myopic LASIK eyes, measured with ZEISS IOLMaster 700 and TK
- Comparison of no-history formulas: Barrett True K with classic K and the new Barrett True-K with TK to Haigis-L, Haigis with TK
- **Barrett True-K TK improved the outcome prediction compared to the Barrett True-K with classic Ks by 7%. (p=0.02)**

60 Eyes:	True K TK	True K	Haigis L	Haigis TK	Shammas
Mean Error	-0.04	-0.17	-0.45	-0.12	-0.36
STDev	0.51	0.57	0.65	0.67	0.62
MAE	0.41	0.47	0.67	0.56	0.59
Med AE	0.34	0.37	0.61	0.50	0.57



# STUDY DESIGN

**PURPOSE:** THIS RETROSPECTIVE STUDY WILL EVALUATE THE USE OF IOL MASTER 700 TOTAL KERATOMETRY (TK) AND THE BARRETT TRUE-K-TK VS OTHER FORMULAE TO IMPROVE POST-REFRACTIVE IOL CALCULATIONS.



# METHODS

- A **RETROSPECTIVE COMPARATIVE CASE** SERIES WAS PERFORMED FOR N=31 EYES OF 20 POST MYOPIC LASIK/PRK PATIENTS UNDERGOING UNCOMPLICATED CATARACT SURGERY.

	Mean ± SD	Range
Axial Length (mm)	26.22 ± 1.52	24.27 to 29.56
Flat Keratometry (K1, D)	39.78 ± 2.02	36.24 to 42.79
Steep Keratometry (K2, D)	40.54 ± 1.99	37.03 to 43.89
MRSE (D)	-0.74 ± 0.75	-2.5 to 0.25

MRSE = MANIFEST REFRACTION SPHERICAL EQUIVALENT  
SD = STANDARD DEVIATION

- THE **OUTCOME MEASURES:**
- MEAN AND MEDIAN ABSOLUTE ERRORS
- % EYES WITHIN 0.5D, 0.75D AND 1D OF REFRACTIVE PREDICTION ERROR

IOLs	Number
ZCB00	16
LI61A0	10
SN60WF	5



# METHODS

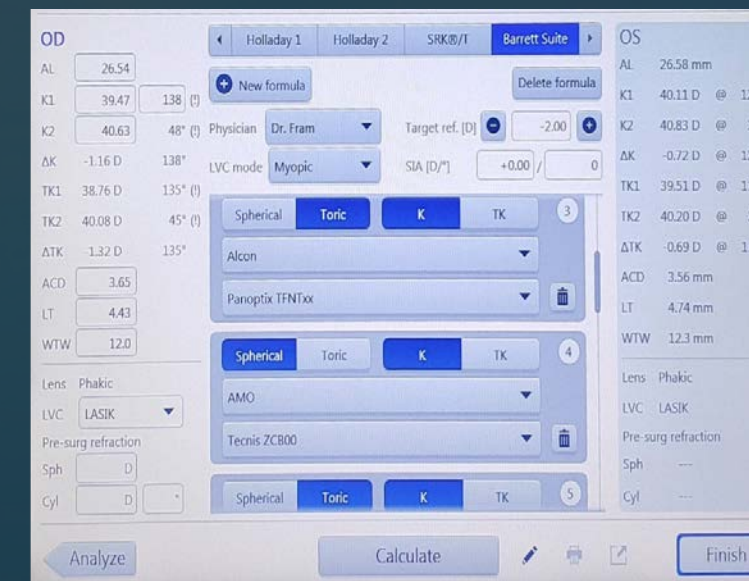
- THE BARRETT TRUE-K AND BARRETT TRUE-K TK FORMULAS WERE COMPARED TO THE ASCRS CALCULATOR AND ORA. BIOMETRY WAS PERFORMED WITH THE IOL MASTER 700.

- THE BARRETT TRUE K-TK WAS CALCULATED USING THE IOL MASTER 700.

- ORA PREDICTED REFRACTION DATA WAS OBTAINED FOR 23/31 OF THE CATARACT SURGERIES.

- ASCRS AVERAGED IOL POWER PREDICTIONS WERE OBTAINED USING THE ASCRS CALCULATOR ON THE ASCRS WEBSITE.

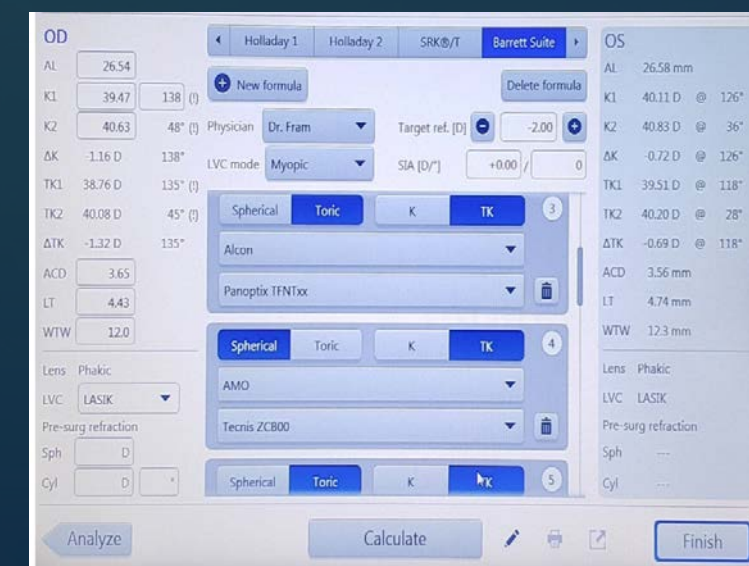
## BARRETT TRUE K-STANDARD K'S



The screenshot shows the ORA IOL calculation results for the right (OD) and left (OS) eyes. The results are presented in a table format, showing the predicted refraction for various IOL formulas. A red circle highlights the Barrett True K results for both eyes, which are: OD: +20.50 -1.97 and OS: +20.50 -2.03.

Formula	OD (D)	OS (D)
Barrett True K	+20.50 -1.97	+20.50 -2.03
Barrett True K TK	+20.50 -1.97	+20.50 -2.03
Barrett True K TK (PK1 and PK2)	+20.50 -1.97	+20.50 -2.03
Barrett True K TK (PK1 and PK2) (Average)	+20.50 -1.97	+20.50 -2.03
Barrett True K TK (PK1 and PK2) (Average) (Average)	+20.50 -1.97	+20.50 -2.03
Barrett True K TK (PK1 and PK2) (Average) (Average) (Average)	+20.50 -1.97	+20.50 -2.03
Barrett True K TK (PK1 and PK2) (Average) (Average) (Average) (Average)	+20.50 -1.97	+20.50 -2.03
Barrett True K TK (PK1 and PK2) (Average) (Average) (Average) (Average) (Average)	+20.50 -1.97	+20.50 -2.03

## BARRETT TRUE K-TK USING PK1 AND PK2



The screenshot shows the ORA IOL calculation results for the right (OD) and left (OS) eyes. The results are presented in a table format, showing the predicted refraction for various IOL formulas. A red circle highlights the Barrett True K-TK results for both eyes, which are: OD: +21.50 -2.18 and OS: +21.50 -2.18.

Formula	OD (D)	OS (D)
Barrett True K	+20.50 -1.97	+20.50 -2.03
Barrett True K TK	+21.50 -2.18	+21.50 -2.18
Barrett True K TK (PK1 and PK2)	+21.50 -2.18	+21.50 -2.18
Barrett True K TK (PK1 and PK2) (Average)	+21.50 -2.18	+21.50 -2.18
Barrett True K TK (PK1 and PK2) (Average) (Average)	+21.50 -2.18	+21.50 -2.18
Barrett True K TK (PK1 and PK2) (Average) (Average) (Average)	+21.50 -2.18	+21.50 -2.18
Barrett True K TK (PK1 and PK2) (Average) (Average) (Average) (Average)	+21.50 -2.18	+21.50 -2.18
Barrett True K TK (PK1 and PK2) (Average) (Average) (Average) (Average) (Average)	+21.50 -2.18	+21.50 -2.18

## INCORPORATES PK1 AND PK2

# RESULTS

Refractive Prediction Absolute Error (D)			
	Mean $\pm$ SD	Median	Range
Barrett True K (Classic K's)	0.347 $\pm$ 0.256	0.27	0.055 to 0.045
Barrett True K TK (Total Keratometry)	0.31 $\pm$ 0.177	0.31	0.045 to 0.69
ORA	0.307 $\pm$ 0.248	0.275	0.01 to 1.09
ASCRS Calculator	0.236 $\pm$ 0.188	0.154	0.007 to 0.714

# RESULTS: % EYES WITHIN 0.5D, 0.75D AND 1D OF REFRACTIVE PREDICTION ERROR.



# CONCLUSIONS

- BOTH THE ASCRS CALCULATOR AND THE BARRETT TRUE K TK HAD 87% EYES WITHIN 0.5D WHICH IS 10% HIGHER THAN ORA AND 16% HIGHER THAN BARRETT TRUE K (CLASSIC K's).
- THE USE OF THE IOL MASTER 700 TOTAL KERATOMETRY AND CALCULATED POSTERIOR CORNEAL CURVATURE (PK1 AND PK2) MEASUREMENTS RESULTED IN IMPROVED ACCURACY FOR POST-REFRACTIVE IOL CALCULATIONS.

OD right		Corneal values		OS left	
Eye status					
LS: Phakic	vs: Vitreous body	LS: Phakic	vs: Vitreous body	Ref: ---	VA: ---
Ref: ---	VA: ---	Ref: ---	VA: ---	LVC: LASIK	LVC: LASIK
Corneal values					
SE: 40.04 D (*)	SD: 0.02 D	SE: ---		K1: ---	
K1: 39.47 D @ 138°	SD: 0.02 D	K1: ---		K2: ---	
K2: 40.63 D @ 48°	SD: 0.03 D	K2: ---		ΔK: ---	
ΔK: -1.16 D @ 138°					
SE: 40.06 D	ΔK: -1.17 D @ 137°	SE: ---	ΔK: ---	SE: ---	ΔK: ---
SE: 40.03 D	ΔK: -1.15 D @ 139°	SE: ---	ΔK: ---	SE: ---	ΔK: ---
SE: 40.11 D	ΔK: -1.04 D @ 138°	SE: ---	ΔK: ---	SE: ---	ΔK: ---
Total Keratometry					
TSE: 39.41 D (*)	SD: 0.04 D	TSE: ---		TK1: ---	
TK1: 38.76 D @ 135°	SD: 0.07 D	TK1: ---		TK2: ---	
TK2: 40.08 D @ 45°	SD: 0.04 D	TK2: ---		ΔTK: ---	
ΔTK: -1.32 D @ 135°					
TSE: 39.44 D	ΔTK: -1.36 D @ 135°	TSE: ---	ΔTK: ---	TSE: ---	ΔTK: ---
TSE: 39.39 D	ΔTK: -1.29 D @ 134°	TSE: ---	ΔTK: ---	TSE: ---	ΔTK: ---
TSE: 39.47 D	ΔTK: -1.18 D @ 138°	TSE: ---	ΔTK: ---	TSE: ---	ΔTK: ---
Corneal back surface values					
PSE: -6.00 D (*)	SD: 0.02 D	PSE: ---		PK1: ---	
PK1: -5.94 D @ 2°	SD: 0.06 D	PK1: ---		PK2: ---	
PK2: -6.06 D @ 92°	SD: 0.04 D	PK2: ---		ΔPK: ---	
ΔPK: -0.12 D @ 92°					
PSE: -5.99 D	ΔPK: -0.10 D @ 99°	PSE: ---	ΔPK: ---	PSE: ---	ΔPK: ---
PSE: -5.98 D	ΔPK: -0.10 D @ 89°	PSE: ---	ΔPK: ---	PSE: ---	ΔPK: ---
PSE: -6.02 D	ΔPK: ---	PSE: ---	ΔPK: ---	PSE: ---	ΔPK: ---
Other values					
CCT: 496 μm	SD: 5 μm	CCT: ---		WTW: ---	bc: --- ly: ---
WTW: 12.0 mm	bc: +0.7 mm ly: +0.1 mm	WTW: ---	bc: --- ly: ---	P: ---	CW-Chord: ---
P: 3.8 mm	CW-Chord: 0.7 mm @ 125°	P: ---	CW-Chord: ---		

(\*) Borderline value (\*) Value was edited manually --- No value measured

TK		AMO Tecnis ZCB00	
- Barrett TK True-K -			
LF: +2.09		DF: +4.0	
IOL (D)		Ref (D)	
+22.50		-2.78	
+22.00		-2.41	
+21.50		-2.04	
+21.00		-1.68	
+20.50		-1.33	
+18.58		Emmetropia	

(\*) Value was edited manually