

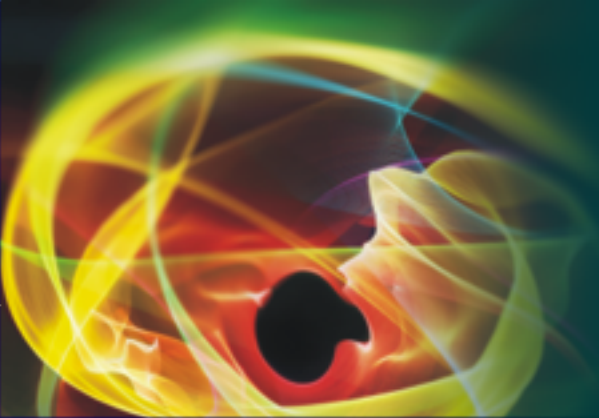
CONGRESSO PORTUGUÊS DE
OFTALMOLOGIA
SOCIEDADE PORTUGUESA DE OFTALMOLOGIA

4 | 5 | 6
Dez. 2014
TIVOLI MARINA VILAROURA

Como resolvo os casos pós Cirurgia Refrativa

Wagner Zacharias

Centro de Cirurgia Ocular Jardins – São Paulo



CONGRESSO PORTUGUÊS DE
OFTALMOLOGIA
SOCIEDADE PORTUGUESA DE OFTALMOLOGIA

4 | 5 | 6
Dez. 2014

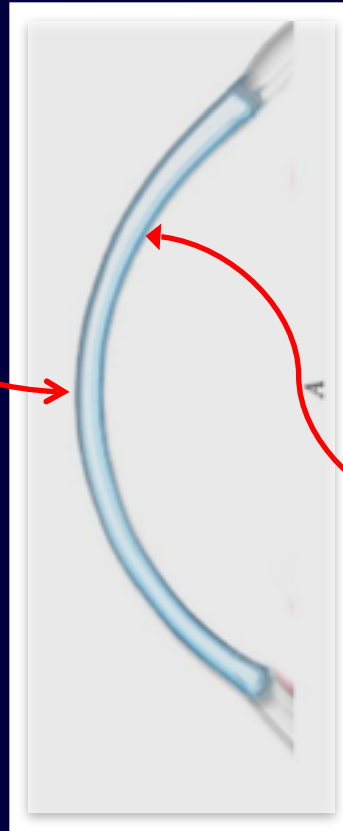
TIVOLI MARINA VILAMOURA

O palestrante não apresenta interesse económico ou comercial relacionado a esta apresentação

$$D = \frac{\eta_2 - \eta_1}{r}$$

$$Sup.ant(D) = \frac{\eta.cornea - \eta.ar}{r.sup\ ant(m)}$$

$$\frac{1.376 - 1.000}{0.0077} = 48.83 D$$



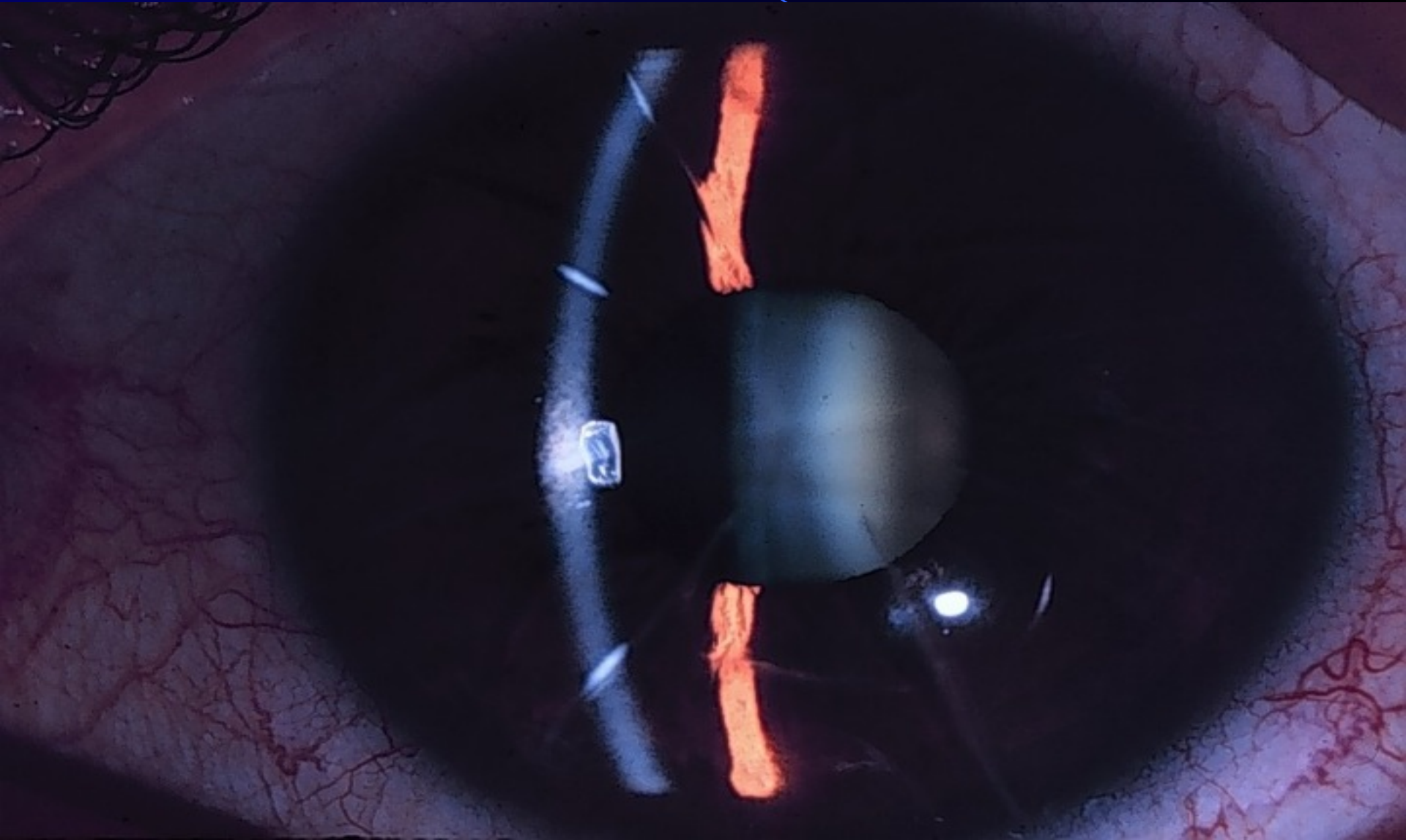
Fator raio p/a
= 82,2%

$$Sup.post = \frac{\eta.aquoso - \eta.cornea}{r.sup.post(m)}$$

$$\frac{1.336 - 1.376}{0.0068} = -5.88 D$$

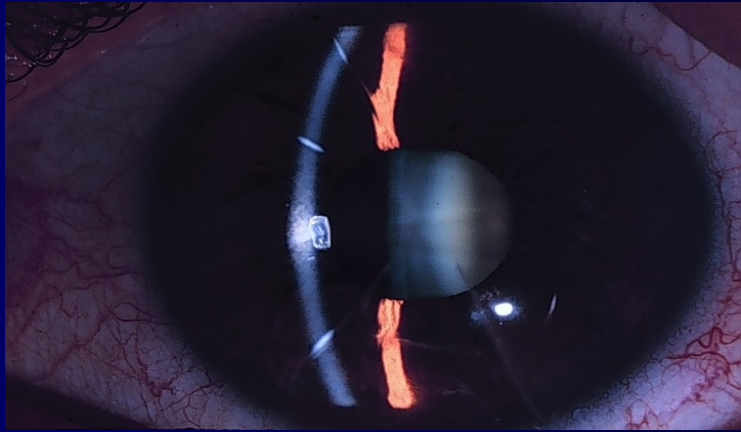
$$48.83 - 5.88 = 42.95$$

Pós Ceratotomia radial



Ceratotomia Radial

Aplanamento da superfície anterior e posterior



“Mantém” a relação superfície anterior/ posterior

Emprego adequado da ceratometria

DUPLA CERATOMETRIA:

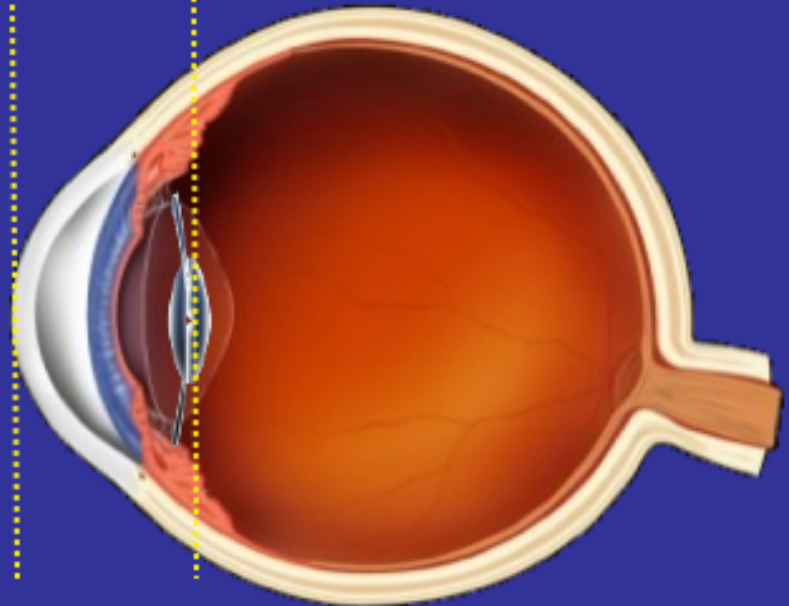
1) Km pré op. para cálculo do ELP
(43,50)

2) Km pós op. para cálculo do poder da
córnea

- ◆ Double K method: Aramberri, J. MD: JCRS, Nov. 2003

Calculadora "Double K"

B
I
O
M
E
T
R
I
A



ALX	25,38
K pre	43,80
K post	39,10
ACD	3,01

Cte A	119,00
a0	-0,769
a1	0,234
a2	0,217

L
|
O

	ELP	LIO
SRK/T	6,15	22,05
Holladay 1	6,34	22,22
Hoffer Q	6,04	21,68
Haigis	5,44	21,48

Otimização do AL – Wang & Koch

Olhos > 25,00mm.

- Holl 1: $0,8814 \times AL_{IOLM} + 2.8701$
- Haigis: $0,9621 \times AL_{IOLM} + 0.6763$
- SRK/T: $0.8981 \times AL_{IOLM} + 2.5637$
- Hoff Q: $0.8776 \times AL_{IOLM} + 2.9269$

Aramberri: Kpré

$$\text{ACD} + \text{LT} = X$$

- Se $X < 7,5$ Kpré = 42,0D
- Se $7,5 < X < 8,10$ 43,5
- Se $X > 8,10$ 45,0

K pós





Ceratômetro manual

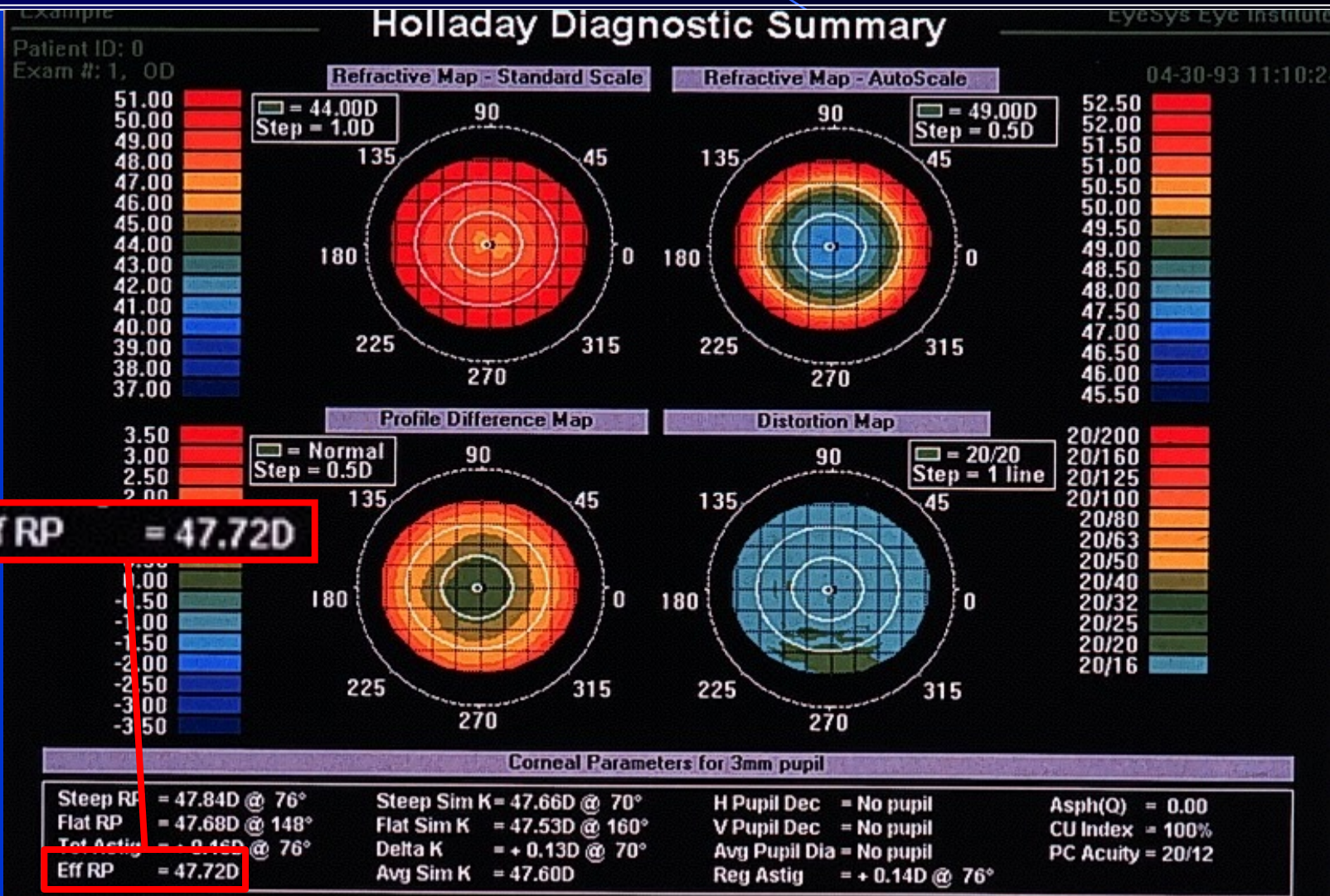


Autoceratômetros

To
pó
gra
fos



Effective Refractive Power



IOL Master™

Schmidt, Karola, 21.09.1995

OD Rechts Adisabene und Kabisabene (Dual-Modus) **OS** Links

Augenstatus Augenstatus

LEH Graph drücken Bombierung KEH

D1: 43.10 dpt
s: 19°
D2: 44.76 dpt
x109°
L:
-1.06 dpt x19°

ALM Automatik

20.60 mm
20.70 mm
20.71 mm
20.69 mm
20.69 mm

20.70 mm

RND.328.7 ✓

20.52 mm
20.53 mm
20.53 mm
20.52 mm
20.53 mm

20.53 mm

RND.351.3 ✓

SNR.328.7



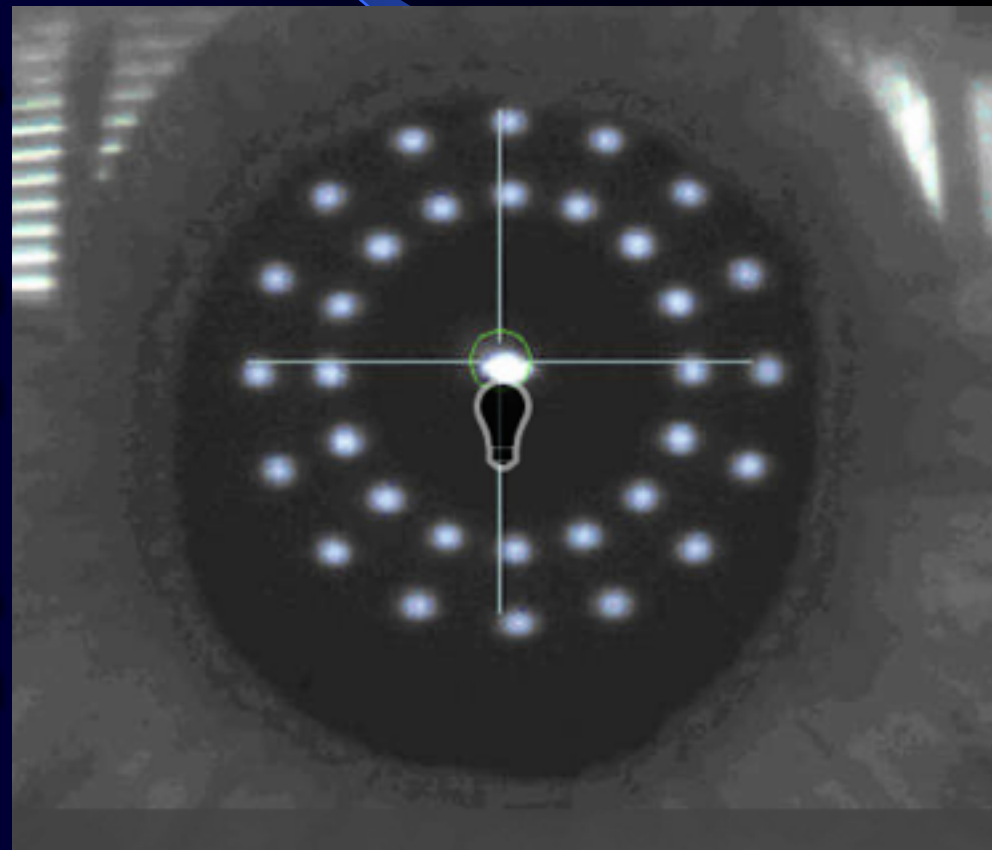
Ceratometria Lenstar™

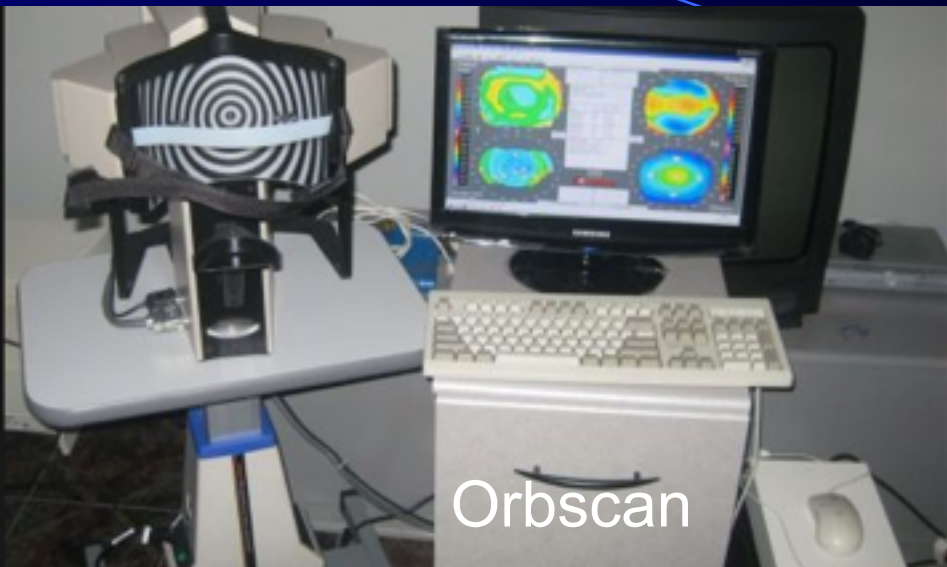
32 pontos

Círculo ext. = 2,30mm

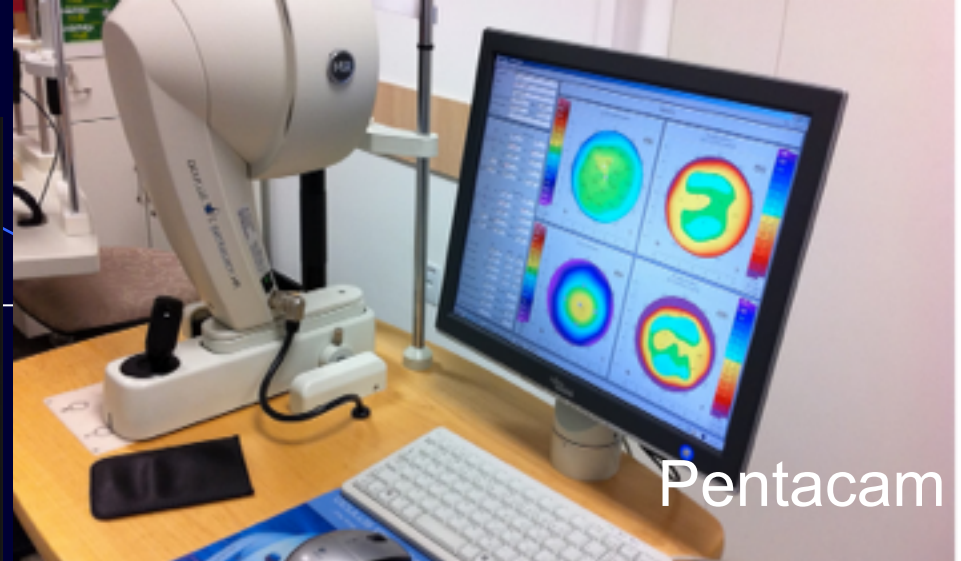
Círculo int. = 1,65mm

Vantagem pós CG
Refrativa





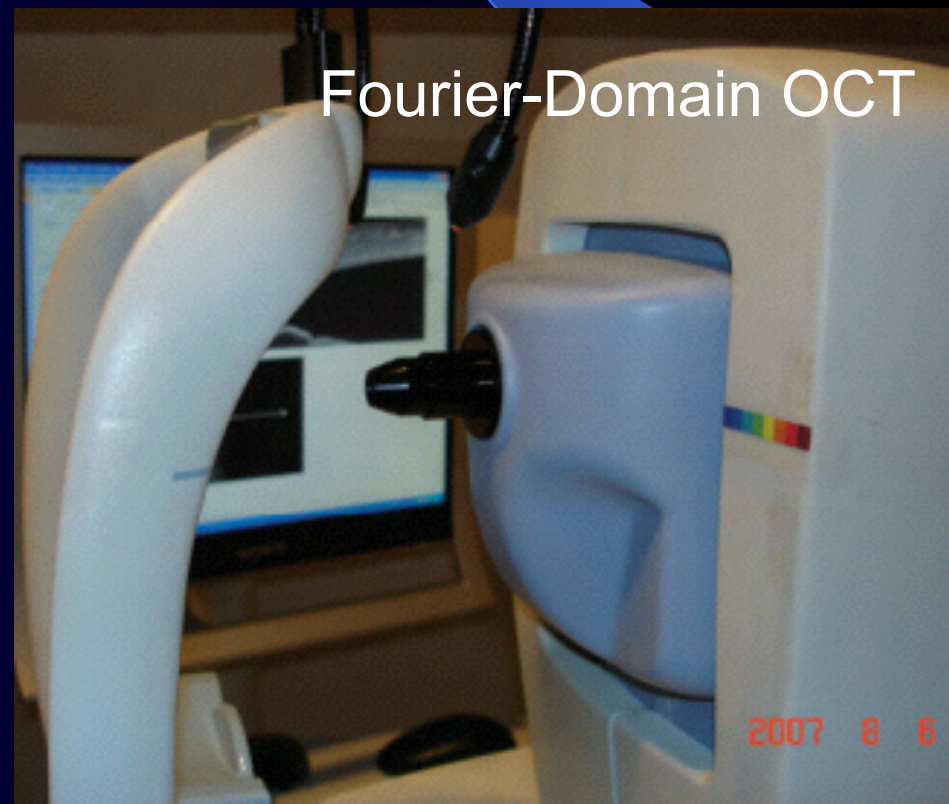
Orbscan



Pentacam



Zieler-Galilei



Fourier-Domain OCT

2007 8 6

EKR - RK

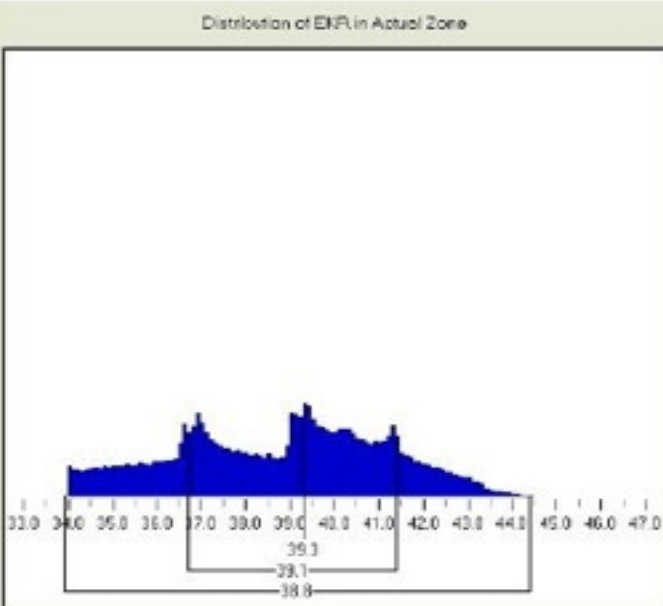
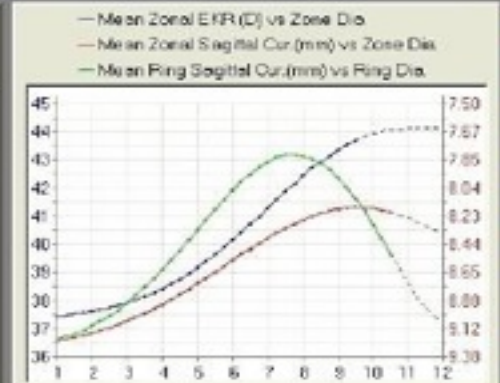
Name: 1 Demo Cataract IOL Calc. Holladay Report
 Date of Birth: 25.08.1970 Eye: Left

ID: FR
 Exam Info:

Exam Date: 02.07.2003
 Exam Time: 17:52:33

Equivalent K-Readings (E) calculated in zones centered on pupil center (Holladay) Holladay Rep.

Zone Diameter	1.0 mm	2.0 mm	3.0 mm	4.0 mm	4.5 mm	5.0 mm	6.0 mm	7.0 mm
EKR K1	36.5 (89%)	35.7 (83%)	36.2 (89%)	37.1 (88%)	37.7 (76%)	38.3 (68%)	39.5 (40%)	40.4 (10%)
EKR K2	38.4 (9%)	39.6 (3%)	39.7 (1.78%)	39.7 (1.72%)	39.8 (1.66%)	40.0 (1.58%)	40.8 (1.30%)	42.2 (100%)
Mean Zonal EKR Km	37.4	37.6	37.9	38.4	38.8	39.2	40.2	41.3
Zonal Std Dev	2.46	2.39	2.26	2.31	2.40	2.56	3.00	3.62
Zonal Std Error of Mean	0.056	0.026	0.017	0.013	0.012	0.011	0.011	0.011
Zonal Samples (N)	1963	8200	10667	33027	42211	52108	75236	102483



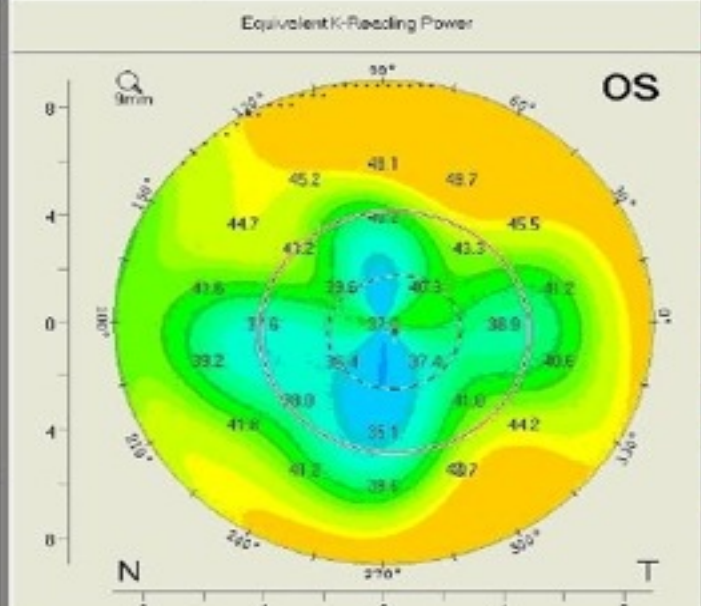
Equivalent K-Readings in Actual Zone

K1: 37.7 (76%)
 K2: 39.8 (166%)
 Km: 38.8 D
 Peak: 39.3 D
 65% Mean: 39.1 D

Edit size of calculation zone:

Zone Dia: 4.5 mm

Pupil-Pos X: 0.18 mm
 Pupil-Pos Y: -0.18 mm
 Pupil Dia: 2.16 mm



D
 Curvature
 Age

Patient

ID: 34686

Date of Birth: 12-Dec-1941 Sex: M

Date: 05/23/2013		RIGHT	Pre-Op. Data	LEFT	Date: 05/23/2013	
Surgeon: MASTER, IOL		Tech: Aline		Surgeon: MASTER, IOL		Tech: Aline
Refraction: +0.50 +0.00 X 0		Vertex: 12.00		Refraction: +1.00 +0.00 X 0		Vertex: 12.00
AL(Optical): 26.74		Adj. AL:		AL(Optical): 26.91		Adj. AL:
BCVA: 20/30		Hor W-t-W: 12.30		BCVA: 20/30		Hor W-t-W: 12.30
UCVA: 20/40		Phakic ACD: 3.32		UCVA: 20/40		Phakic ACD: 3.37
K1: 36.80 @179		Phakic Lens Th.: 4.70		K1: 36.49 @159		Phakic Lens Th.: 4.70
K2: 37.21 @89		Target SEQ Ref: 0.00		K2: 37.17 @69		Target SEQ Ref: 0.00
Astigm.: +0.41 @ 89		Tgt Add:		Astigm.: +0.68 @ 69		Tgt Add:
Average K: 37.00	Adjusted K: 36.90	n: 1.3375		Average K: 36.83	Adjusted K: 37.20	n: 1.3375

Additional Data

Eye Status: Phakic	PreOp Pathology: No	Eye Status: Phakic	PreOp Pathology: No
New PC Lens: in bag	Prev. Rk... : Yes	New PC Lens: in bag	Prev. Rk... : Yes
	Keratoconus: No		Keratoconus: No
	Scleral Buckle: No		Scleral Buckle: No
	Silicone in Vitreous Cavity: No		Silicone in Vitreous Cavity: No

Formula: Holladay II

Formula: Holladay II

ALCON SN60WF IOL		Alcon SA60Tx		ALCON SN60WF IOL		Alcon SA60Tx	
Procedure: Std Phaco		Procedure: Std Phaco		Procedure: Std Phaco		Procedure: Std Phaco	
PLC ACD(Opt): 5.53		MFG* ACD(Opt): 5.40		PLC ACD(Opt): 5.53		MFG* ACD(Opt): 5.40	
<u>IOL SEQ</u>	<u>SEQ Ref.</u>	<u>IOL SEQ</u>	<u>SEQ Ref.</u>	<u>IOL SEQ</u>	<u>SEQ Ref.</u>	<u>IOL SEQ</u>	<u>SEQ Ref.</u>
20.00	0.67	20.00	0.51	19.50	0.42	19.00	0.59
20.50	0.34	20.50	0.17	20.00	0.08	19.50	0.24

Patient: **Master, Edward**

ID: 34686

Date of Birth: 12-Dec-1941

Sex: M

Date: 05/23/2013

Surgeon: **MASTER, IOL**

Refraction: **+0.50 +0.00 X 0**

AL(Optical): **26.74**

BCVA: **20/30**

UCVA: **20/40**

K1: **36.80 @179**

K2: **37.21 @89**

Astigm.: **+0.41 @ 89**

Average K: **37.00**

Adjusted K: **36.90**

n: **1.3375**

RIGHT

Tech: **Aline**

Vertex: **12.00**

Adj. AL:

Hor W-t-W: **12.30**

Phakic ACD: **3.32**

Phakic Lens Th.: **4.70**

Target SEQ Ref: **0.00**

Tgt Add:

Pre-Op. Data

LEFT

Date: 05/23/2013

Surgeon: **MASTER, IOL**

Tech: **Aline**

Vertex: **12.00**

Hor W-t-W: **12.30**

Phakic ACD: **3.37**

Phakic Lens Th.: **4.70**

Target SEQ Ref: **0.00**

n: **1.3375**

PreOp Pathology: No
Prev. Rk... : Yes
Keratoconus: No

Additional Data

Eye Status: **Phakic**

New PC Lens: **in bag**

PreOp Pathology: **No**

Prev. Rk... : **Yes**

Keratoconus: **No**

Scleral Buckle: **No**

Silicone in Vitreous Cavity: **No**

Formula: **Holladay II**

ALCON SN60WF IOL

Procedure: **Std Phaco**

PLC ACD(Opt): **5.53**

IOL SEQ	SEQ Ref.
20.00	0.67
20.50	0.34

Alcon SA60Tx

Procedure: **Std Phaco**

MFG* ACD(Opt): **5.40**

IOL SEQ	SEQ Ref.
20.00	0.51
20.50	0.17

ALCON SN60WF IOL

Procedure: **Std Phaco**

PLC ACD(Opt): **5.53**

IOL SEQ	SEQ Ref.
19.50	0.42
20.00	0.08

Alcon SA60Tx

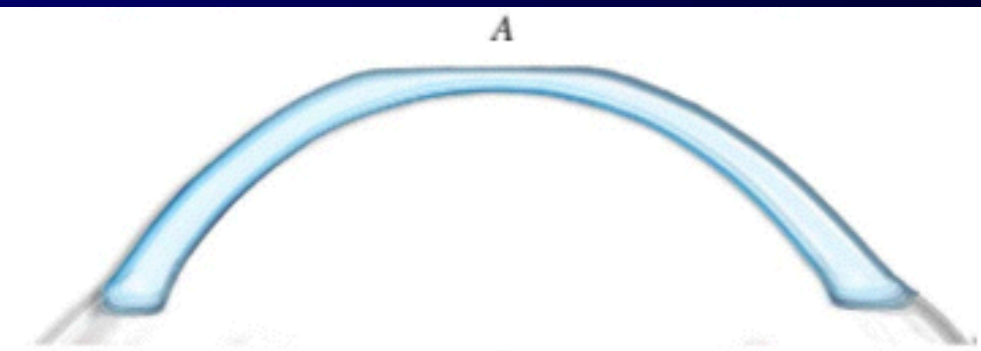
Procedure: **Std Phaco**

MFG* ACD(Opt): **5.40**

IOL SEQ	SEQ Ref.
19.00	0.59
19.50	0.24

Pós Ablação Corneana

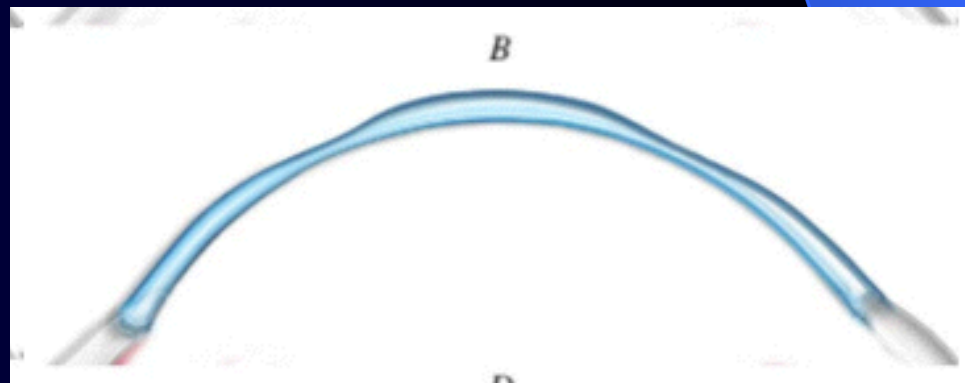
Miopia



Fator raio p/a
< 82,2%

Hipermetropia

Fator raio p/a
> 82,2%



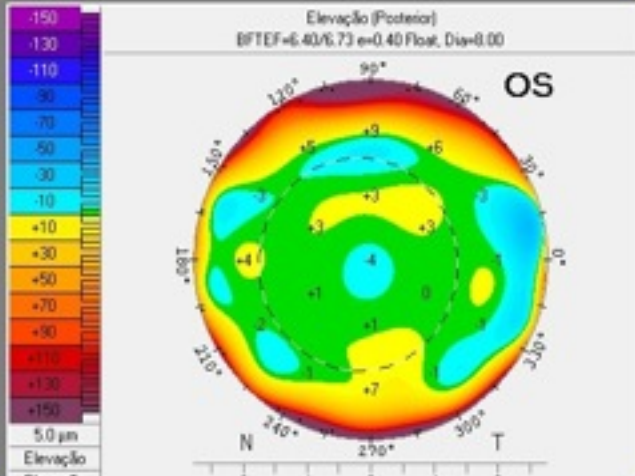
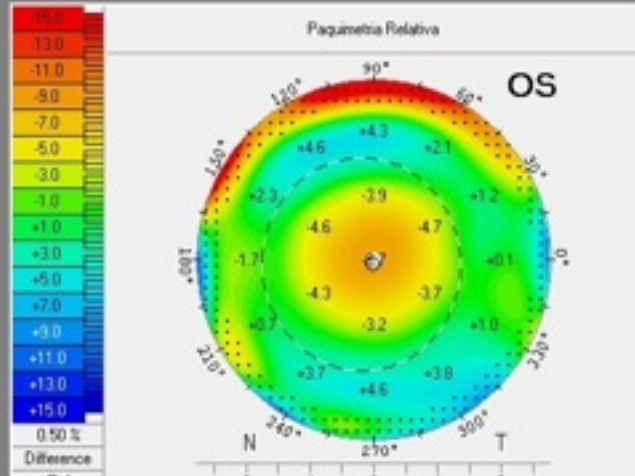
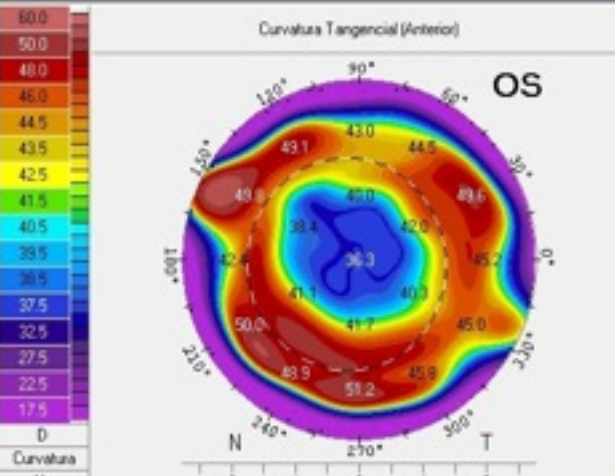
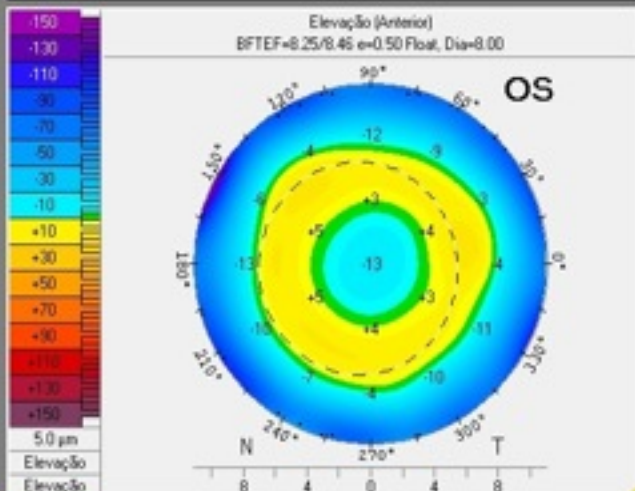
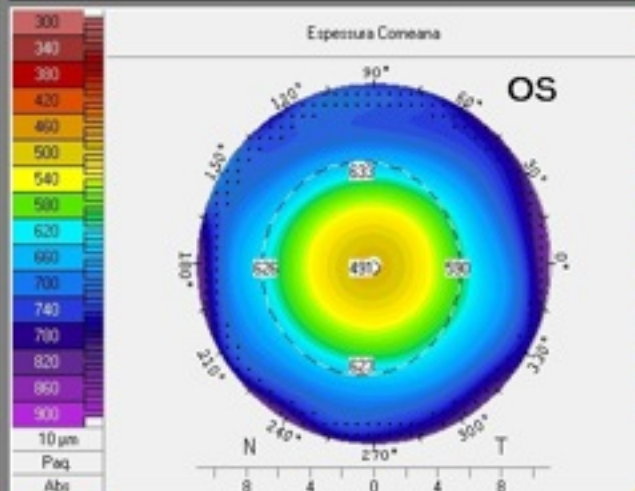
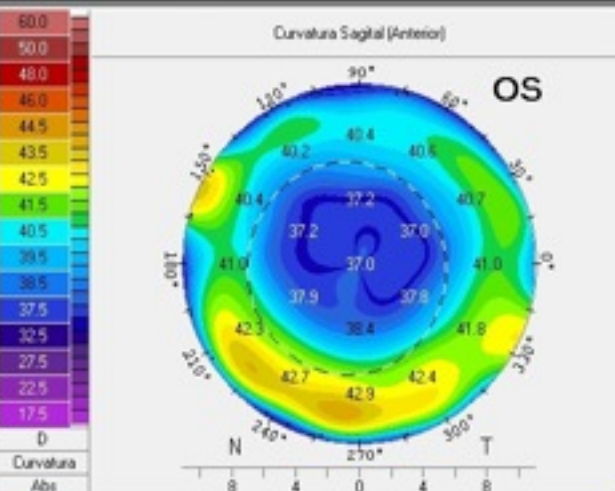
Kpré - MLASIK

Sobrenome: Kenshina
 Nome: Eduardo Yoshimasa
 ID: 34686
 Data de Nascimento: 12/12/1941 Olho: Esquerdo
 Data de Exame: 23/05/2013 Hora: 14:48:23

Equivalent K-readings (4.5mm Zone)

K1: 37.2 D (158.6°) Astig: 0.5 D
 K2: 37.7 D (68.6°) Q (4.5mm): 0.85
 Km: 37.5 D


Fator Rho (P/A): 74.5% Ø Pupilar: 6.30 mm
 Qi: 0K Paq. Min: 489 µm
 Val. pré-op. estimado, SimK (n=1.3375)
 Km: 41.0 D Mudança Ref.: -3.8 D



Kpré - HLASIK

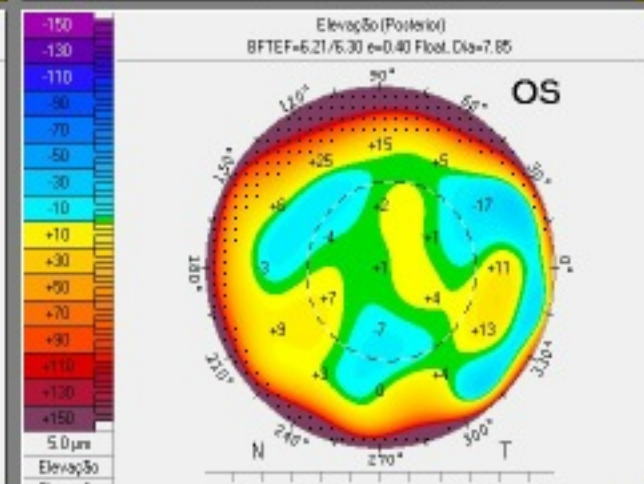
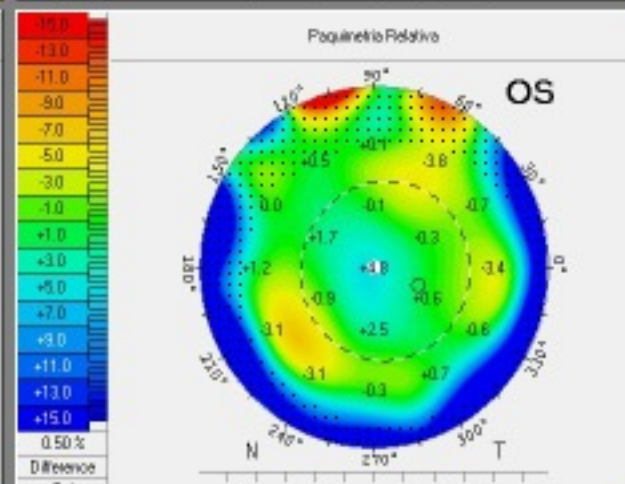
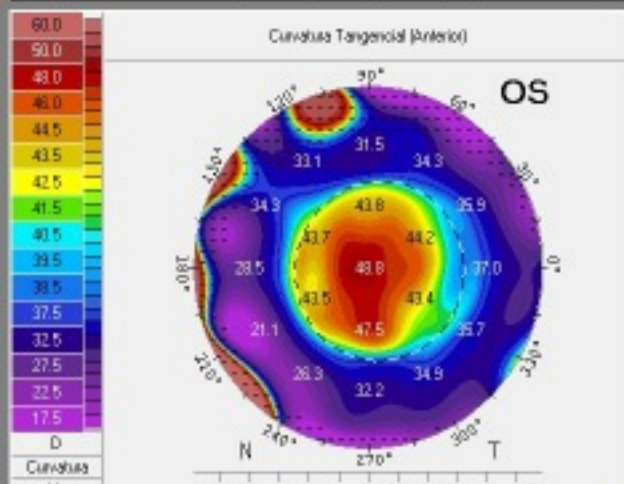
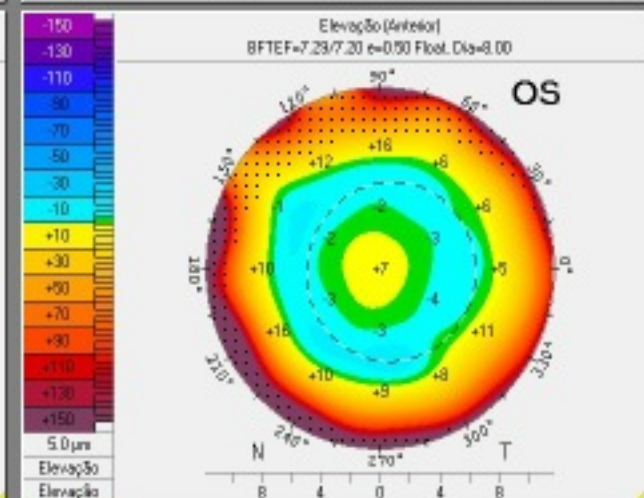
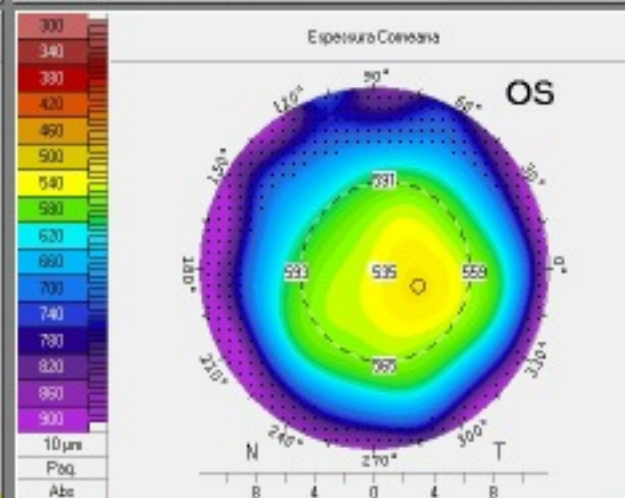
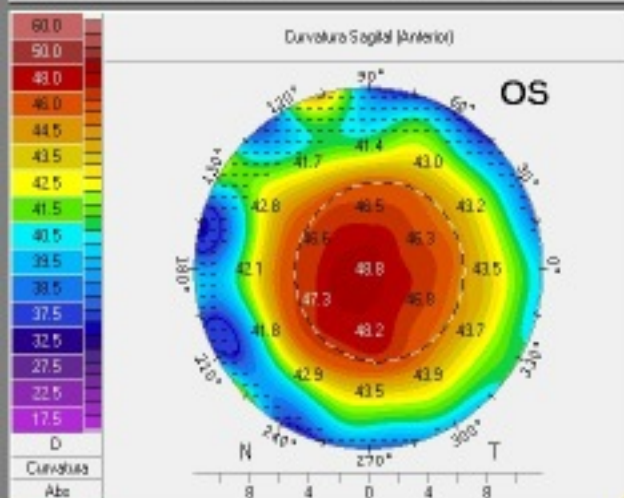
Sobrenome: [Gepp]
 Nome: [Marta Claudia De Azevedo]
 ID: [24095]
 Data de Nascimento: [23/08/1945] Olho: [Esquerdo]
 Data de Exame: [10/06/2013] Hora: [17:20:53]

Equivalent K-Readings (4.5mm Zone)



K1 [47.6D (135.4°)] Avg: [-0.3D]
 K2 [47.9D (45.4°)] Q (4.5mm): [-0.85]
 Km [47.8D] Details

Fator Baio (P/A): [98.4%] 8 Pupilar: [5.75mm]
 QI: [OK] Paq. Mín.: [522µm]
 Val. pré-op. estimado. Sinf. (j=1.3375)
 Km: [44.3D] Mudança Rel.: [+3.4D]



EKR - MLASIK

Paciente Exame Tela Detalhadas

Examiner Report MG Imprimir

Nome:
 Data de Nascimento: ID do Pac.:

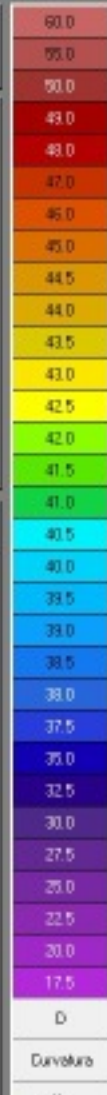
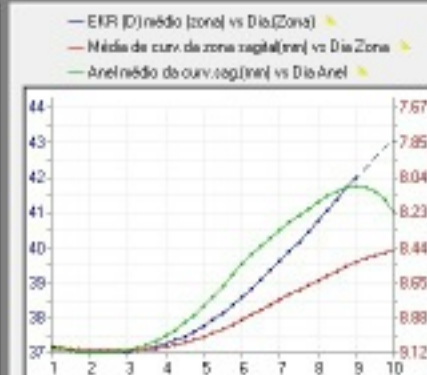
Data de Exame:
 Hora do Exame:

QI: Olio:
 Int. Exam:

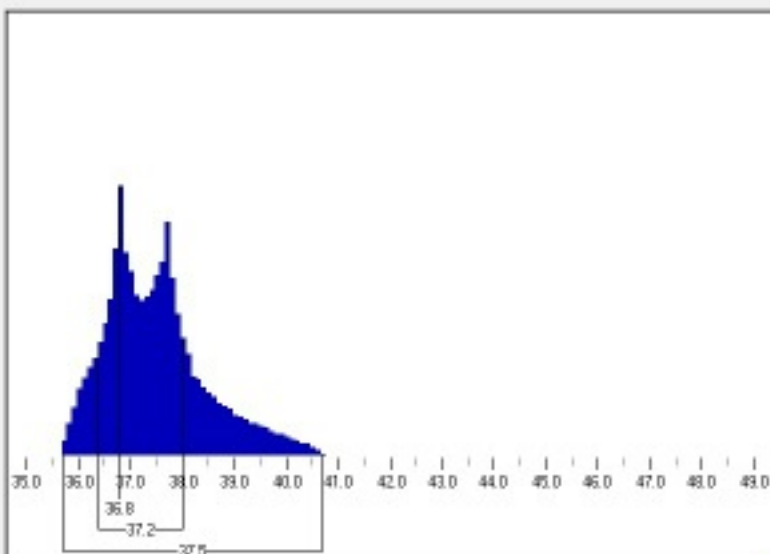
Equivalent K-Readings (D) calculadas nas zonas convencionais à pupila (Holiday)

Holiday Rep.

Diâmetro da Zona		1.0mm	2.0mm	3.0mm	4.0mm	4.5mm	5.0mm	6.0mm	7.0mm
EKR	K	37.0 (70°)	36.8 (149°)	36.8 (154°)	37.0 (158°)	37.2 (159°)	37.5 (158°)	38.3 (155°)	39.3 (156°)
EKR	K	37.3 (160°)	37.3 (58°)	37.4 (64°)	37.5 (68°)	37.8 (69°)	38.0 (68°)	38.9 (65°)	40.0 (66°)
EKR médio-Zona	K	37.1	37.0	37.1	37.3	37.5	37.8	38.6	39.6
Desv. Padrão-Zona		0.71	0.65	0.62	0.78	0.98	1.25	1.90	2.58
Ero padrão- médio-Zona		0.016	0.007	0.005	0.004	0.005	0.005	0.007	0.008
Anelster-Zona (N)		2009	8326	18839	33555	42505	52480	75995	102883



Distribuição do EKR na zona atual



Equivalent K-Readings na zona atual

K1:
 K2:
 Km:
 Pico:
 65thMédia:

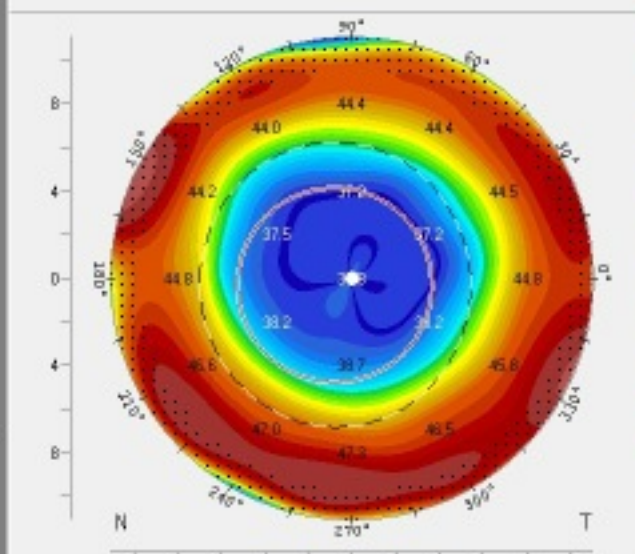
Editar tamanho da zona p/cálculo:



Ø Zona: mm

Poz PupilaK:
 Poz PupilaY:
 Ø Pupila:

Equivalent K-Reading Power



EKR - HLASIK

Paciente Exame Tela Definições

ExamiPad® Report .PDF Imprimir

Nome:
 Data de Nascimento: ID do Pac.:

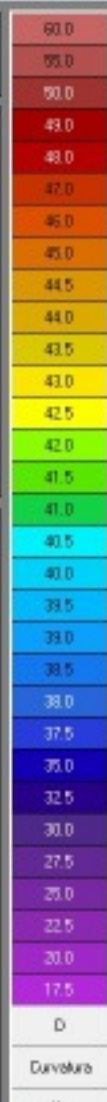
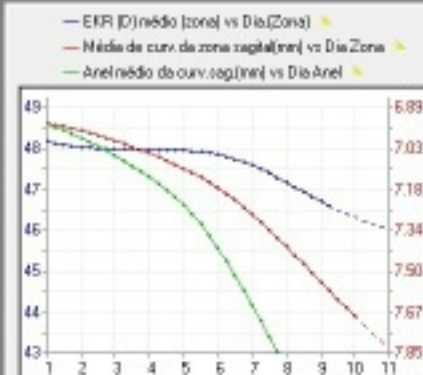
Data de Exame:
 Hora do Exame:

Ql: Oho:
 Int. Exami:

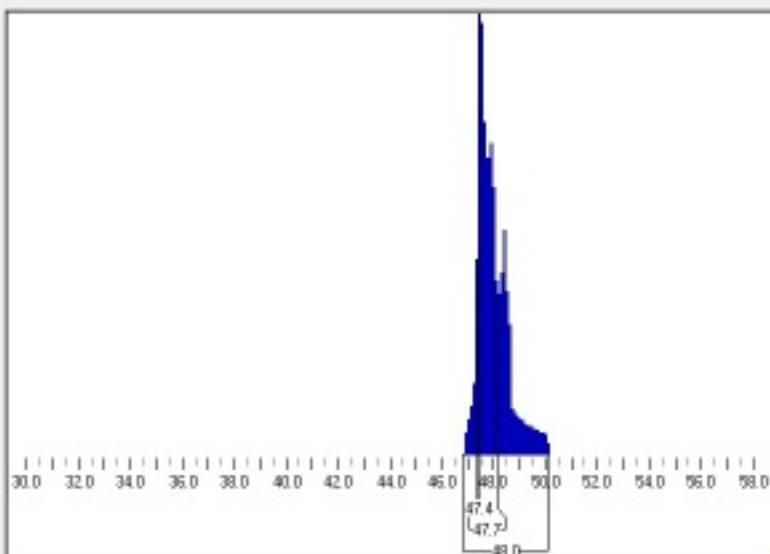
Equivalent K-Readings (D) calculadas nas zonas conométricas à pupila (Holiday)

Holiday Rep.

Diâmetro da Zona	1.0mm	2.0mm	3.0mm	4.0mm	4.5mm	5.0mm	6.0mm	7.0mm
EKR	K 48.0 (139°)	47.8 (139°)	47.8 (143°)	47.8 (178°)	47.7 (10°)	47.6 (16°)	47.5 (19°)	47.1 (24°)
EKR	K 48.3 (48°)	48.3 (49°)	48.2 (59°)	48.2 (86°)	48.2 (100°)	48.3 (106°)	48.2 (109°)	48.0 (114°)
EKR médio-Zona	K 48.2	48.0	48.0	48.0	48.0	48.0	47.8	47.6
Desv. Padrão-Zona	0.34	0.37	0.36	0.50	0.60	0.68	0.73	0.92
Ero padrão- médio-Zona	0.008	0.004	0.003	0.003	0.003	0.003	0.003	0.003
Amostran-Zona (N)	2009	8326	18839	33555	42505	52480	75995	102883



Distribuição do EKR na zona atual



Equivalent K-Readings na zona atual

K1:
 K2:
 Km:
 Pico:
 65th Média:

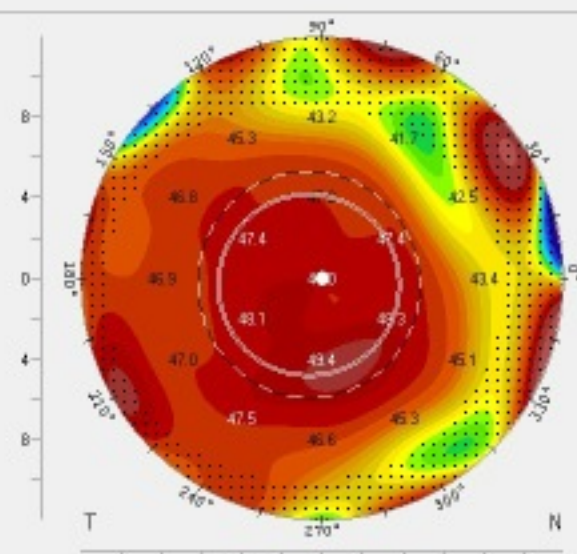
Editar tamanho da zona p/cálculo:



Ø Zona: mm

Pos. Pupilar:
 Pos. Pupilar:
 Ø Pupilar:

Equivalent K-Reading Power



Name:

ID: 34686

Date of Birth: 12/12/1941

Exam Date: 23/05/2013

Eye Surgeon: **C.C.O.Jardins**

Formula: Haigis-L. (myopic)

Target Ref.: plano

n: 1.3375



The readings should be checked for plausibility, as there might be pathological changes.
Valid for myopic LASIK/LASEK/PRK only! Do not use after RK or hyperopic treatments!

OD right		AL: 26.74 mm (SNR = 525.8) K1: 36.80 D / 9.17 mm @ 179° K2: 37.21 D / 9.07 mm @ 89° R / SE: 9.12 mm (SD = 37.00 mm) Cyl: -0.41 D @ 179° opt. ACD: 3.32 mm		OS left		AL: 26.91 mm (SNR = 218.4) K1: 36.49 D / 9.25 mm @ 159° K2: 37.17 D / 9.08 mm @ 69° R / SE: 9.16 mm (SD = 36.83 mm) Cyl: -0.68 D @ 159° opt. ACD: 3.37 mm	
Eye Status: phakic		Eye Status: phakic		Eye Status: phakic		Eye Status: phakic	
Alcon SN60WF		Alcon AcrySof MA60AC		Alcon SN60WF		Alcon AcrySof MA60AC	
A0 Const:	-0.82	A0 Const:	0.229	A0 Const:	-0.82	A0 Const:	0.229
A1 Const:	0.196	A1 Const:	0.011	A1 Const:	0.196	A1 Const:	0.011
A2 Const:	0.224	A2 Const:	0.205	A2 Const:	0.224	A2 Const:	0.205
IOL (D)	REF (D)	IOL (D)	REF (D)	IOL (D)	REF (D)	IOL (D)	REF (D)
24.5	-1.25	24.0	-0.97	24.0	-0.95	24.0	-1.07
24.0	-0.87	23.5	-0.60	23.5	-0.58	23.5	-0.70
23.5	-0.50	23.0	-0.24	23.0	-0.22	23.0	-0.33
23.0	-0.14	22.5	0.13	22.5	0.14	22.5	0.03
22.5	0.22	22.0	0.48	22.0	0.50	22.0	0.39
22.0	0.57	21.5	0.84	21.5	0.85	21.5	0.75
21.5	0.92	21.0	1.19	21.0	1.20	21.0	1.10
Emme. IOL: 22.00		Emme. IOL: 22.67		Emme. IOL: 22.70		Emme. IOL: 22.55	

Name: _____

ID: 16245

Date of Birth: 12/08/1950

Exam Date: 13/05/2013

Eye Surgeon: **C.C.O.Jardins**

Formula: Haigis-L (hyperopic)

Target Ref.: plano

n: 1.3375

ZEISS**Valid for hyperopic LASIK/LASEK/PRK only! Do not use after RK or myopic treatments!**

✚

OD

right

AL: 23.33 mm (SNR = 110.6)
 K1: 43.95 D / 7.68 mm @ 146°
 K2: 44.70 D / 7.55 mm @ 56°
 R / SE: 7.62 mm (SD = 44.33 mm)
 Cyl: -0.75 D @ 146°

opt. ACD: 3.39 mm

Eye Status: phakic

OS

left

AL: 23.23 mm (SNR = 266.7)
 K1: 44.23 D / 7.63 mm @ 94°
 K2: 45.00 D / 7.50 mm @ 4°
 R / SE: 7.56 mm (SD = 44.61 mm)
 Cyl: -0.77 D @ 94°

opt. ACD: 3.17 mm

Eye Status: phakic

Alcon SN60WF**Bausch&Lomb LI61AO
SofPort**

A0 Const: -0.82
 A1 Const: 0.196
 A2 Const: 0.224

A0 Const: 0.057
 A1 Const: 0.186
 A2 Const: 0.171

IOL (D)	REF (D)
22.0	-1.02
21.5	-0.67
21.0	-0.31
20.5	0.04
20.0	0.38
19.5	0.72
19.0	1.06

IOL (D)	REF (D)
21.5	-1.23
21.0	-0.86
20.5	-0.50
20.0	-0.14
19.5	0.22
19.0	0.58
18.5	0.93

Emme. IOL: 20.55

Emme. IOL: 19.81

Alcon SN60WF**Bausch&Lomb LI61AO
SofPort**

A0 Const: -0.82
 A1 Const: 0.196
 A2 Const: 0.224

A0 Const: 0.057
 A1 Const: 0.186
 A2 Const: 0.171

IOL (D)	REF (D)
22.0	-1.12
21.5	-0.77
21.0	-0.41
20.5	-0.06
20.0	0.29
19.5	0.63
19.0	0.97

IOL (D)	REF (D)
21.0	-0.95
20.5	-0.59
20.0	-0.22
19.5	0.14
19.0	0.49
18.5	0.84
18.0	1.19

Emme. IOL: 20.42

Emme. IOL: 19.69

Patient: ID: 35567 Date of Birth: 15-Nov-1965 Sex: Female

Date: 05/02/2013		RIGHT Pre-Op. Data		LEFT Date: 05/02/2013	
Surgeon: MASTER, IOL		Tech: Fabio Salvi		Surgeon: MASTER, IOL	
Tech: Fabio Salvi				Tech: Fabio Salvi	
Refraction: -1.00 -1.00 X 100		Vertex: 12.00		Refraction: +0.00 -1.25 X 80	
Vertex: 12.00				Vertex: 12.00	
AL(Optical): 27.38		Adj. AL:		AL(Optical): 27.10	
Adj. AL:				Adj. AL:	
BCVA: 20/400		Hor W-t-W: 11.70		BCVA: 20/50	
Hor W-t-W: 11.60				Hor W-t-W: 11.60	
UCVA: CF		Phakic ACD: 3.65		UCVA: 20/70	
Phakic ACD: 3.52				Phakic ACD: 3.52	
K1: 38.35 @24		Phakic Lens Th.: 4.40		K1: 37.92 @148	
Phakic Lens Th.: 4.40				Phakic Lens Th.: 4.40	
K2: 38.62 @114		Target SEQ Ref: 0.00		K2: 38.79 @58	
Target SEQ Ref: -1.50				Target SEQ Ref: -1.50	
Astigm.: +0.27 @ 114		Tgt Add:		Astigm.: +0.87 @ 58	
Tgt Add:				Tgt Add:	
Average K: 38.48		Adjusted K: 38.70 n: 1.3375		Average K: 38.36	
Adjusted K: 38.70				Adjusted K: 40.10	
n: 1.3375				n: 1.3375	

Additional Data

Eye Status: Phakic	PreOp Pathology: No	Eye Status: Phakic	PreOp Pathology: No
New PC Lens: in bag	Prev. Rk... : Yes	New PC Lens: in bag	Prev. Rk... : Yes
	Keratoconus: No		Keratoconus: No
	Scleral Buckle: No		Scleral Buckle: No
	Silicone in Vitreous Cavity: No		Silicone in Vitreous Cavity: No

Formula: Holladay II

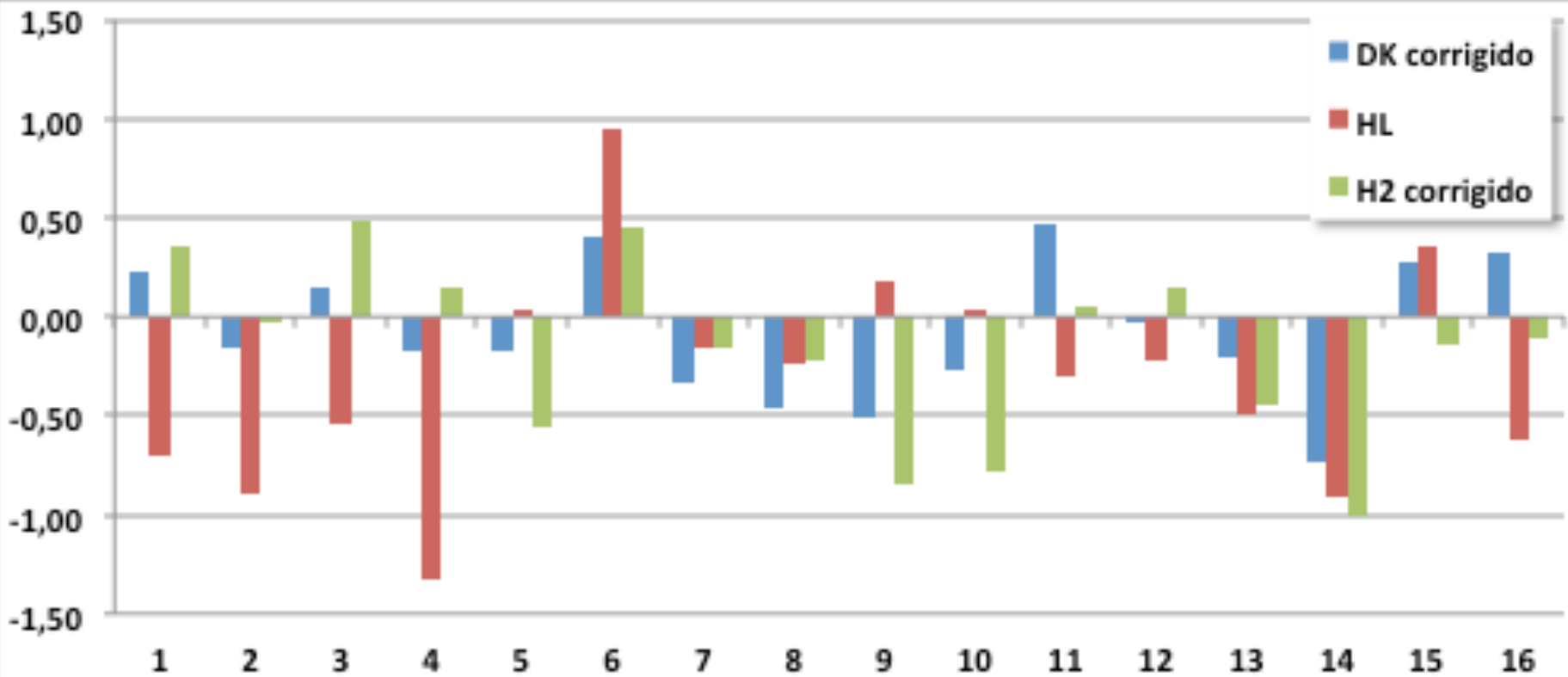
Formula: Holladay II


ALCON SN60WF IOL		Alcon SA60Tx		ALCON SN60WF IOL		Alcon SA60Tx	
Procedure: Std Phaco		Procedure: Std Phaco		Procedure: Std Phaco		Procedure: Std Phaco	
PLC ACD(Opt): 5.53		MFG* ACD(Opt): 5.40		PLC ACD(Opt): 5.53		MFG* ACD(Opt): 5.40	
<u>IOL SEQ</u>	<u>SEQ Ref.</u>	<u>IOL SEQ</u>	<u>SEQ Ref.</u>	<u>IOL SEQ</u>	<u>SEQ Ref.</u>	<u>IOL SEQ</u>	<u>SEQ Ref.</u>
16.00	0.45	15.50	0.64	17.00	-1.13	16.50	-0.93
16.50	0.13	16.00	0.32	17.50	-1.46	17.00	-1.27
16.70	-0.00	16.49	0.00	17.55	-1.50	17.33	-1.50
17.00	-0.20	16.50	-0.01	18.00	-1.81	17.50	-1.62
17.50	-0.53	17.00	-0.34	18.50	-2.16	18.00	-1.97

46 casos: 16LH, 8LM, 22RK

Desvios	Média Aritmética	Média Absoluta	Max. +	Max. -	D. P.
<i>Double K</i>	<i>0,01D</i>	<i>0,41D</i>	<i>+1,49D</i>	<i>-1,47D</i>	<i>0,52</i>
<i>Holl.2</i>	<i>0,14</i>	<i>0,39</i>	<i>+1,66</i>	<i>-1,16</i>	<i>0,53</i>
<i>Haigis L</i>	<i>-0,30</i>	<i>0,47</i>	<i>+0,94</i>	<i>-1,33</i>	<i>0,36</i>

Double K x HOLL2 x Haigis L

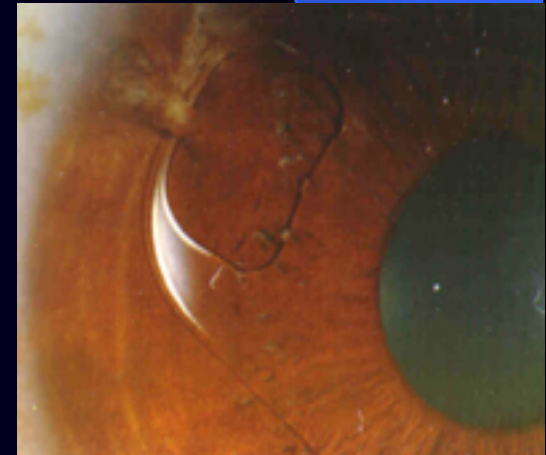
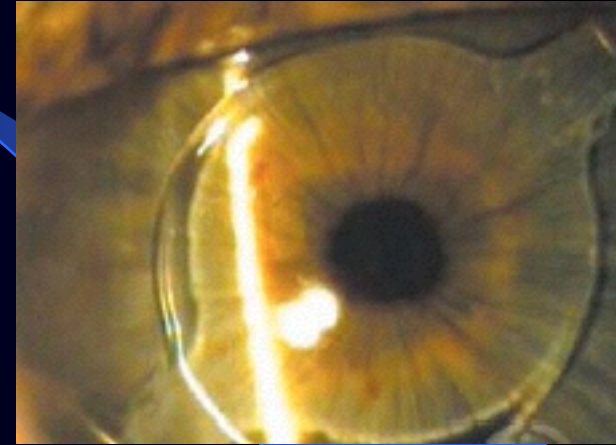
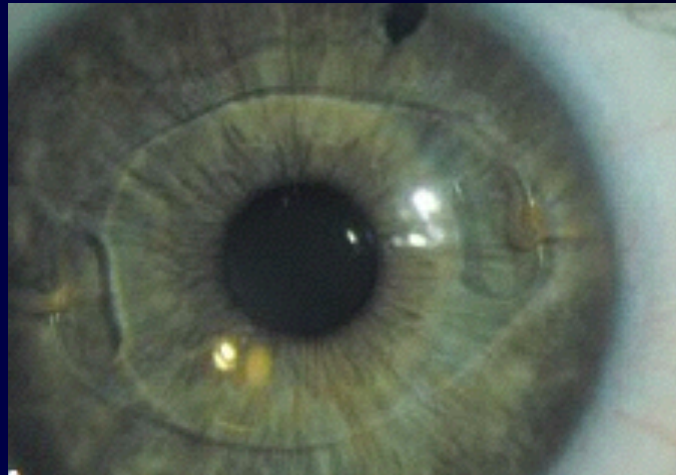




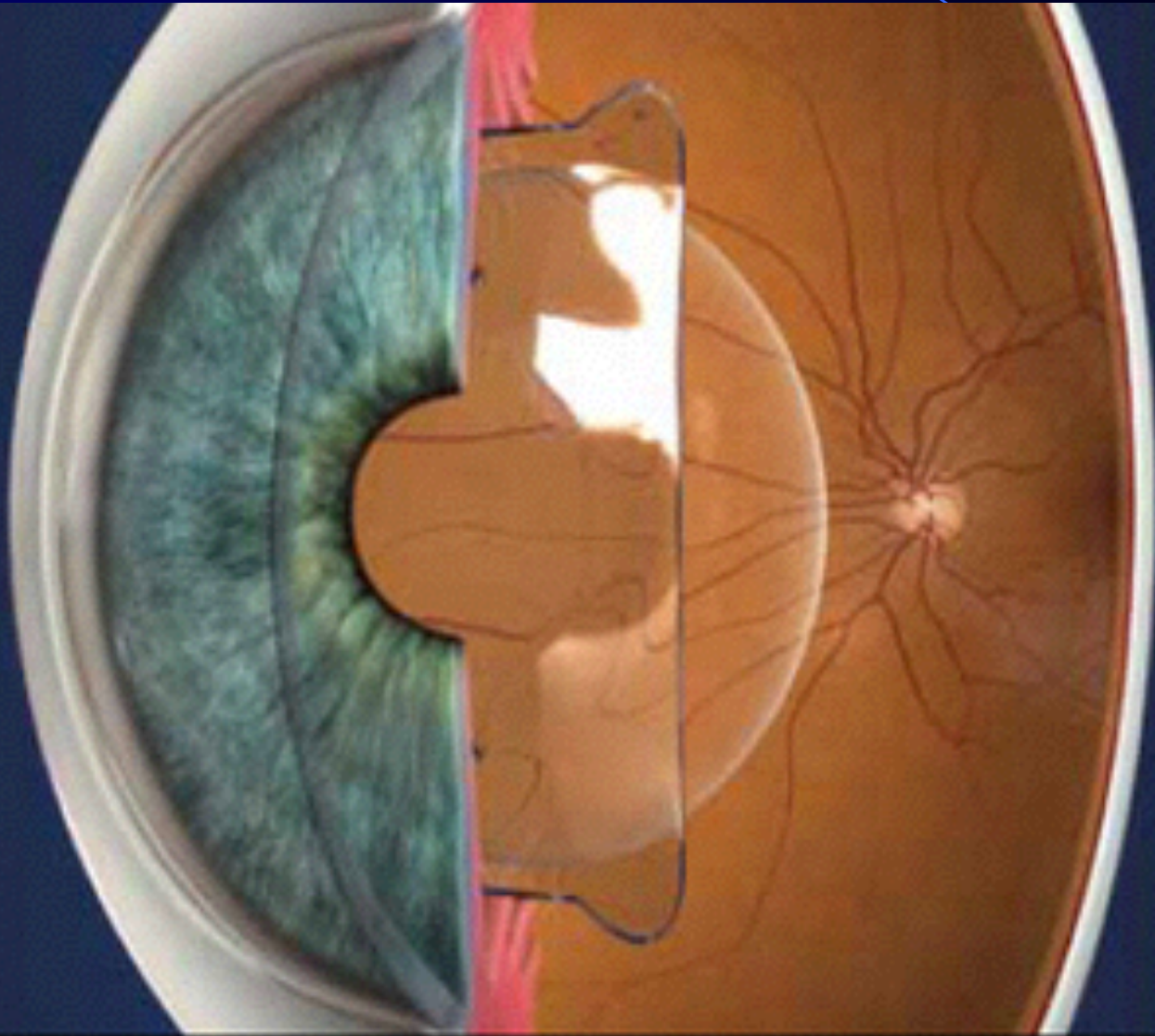
BIOMETRIA NO OLHO BIFÁCICO

LIO de CA para fáxicos

- Artisan (Artiflex)
- Verisyse (Veriflex)
- Baikoff
- Cachet



LIO de CP para fáxicos



Olho bifácico

Fórmula de Hoffer para Ecobiometria:

$$AL_{\text{corr}} = AL_{1555} + X \cdot T$$

Sendo: $X = + 0,42$ p/ PMMA

- 0,59 silicone

+ 0,11 collamer

+ 0,23 acrílica

$T =$ espessura da LIO

H.K. 48 a. masc. branco.

Gostaria de operar para ficar sem óculos.
Intolerante às LC.

Rf.: + 9,00 - 0,75 x 05 20/20
+ 9,00 - 1,25 x 165 20/20p Ad +2,00 J1

Exame OFT normal.

LIO Artisan H

8/12/00 : Implante LIO + 11,00 OD

20/12/00: Implante LIO + 11,00 OE

- Rf. 9/5/02: pl - 0,50 x 180 20/20
pl - 0,50 x 165 20/20p

Artisan H AO

23/3/06: Qx dificuldade visual OE

Rf. PI - 0,50 x 180 20/20
- 1,00 -1,50 x 165 20/30p

L.F. Catarata Co a +, Nu ++, Co p +

Ecobiometria: AL = 19,89mm

Ceratometria: Km = 44,73D

Artisan H + Catarata OE

COMO CALCULAR A LIO

?

Olho bifácico

Fórmula de Hoffer:

$$AL_{\text{corr}} = AL_{1555} + X \cdot T$$

Sendo: $X = + 0,42$ p/ PMMA

- 0,59 silicone

+ 0,11 collamer

+ 0,23 acrílica

$T =$ espessura da LIO

$$AL_{\text{corr}} = AL_{1555} + X \cdot T$$

$$Al_{\text{corr}} = 19,89 + 0,42 \times 0,553$$

$$Al_{\text{corr}} = 20,12\text{mm}$$

LIO SN 60 AT

Holladay: 31,79 D

IOL Master™

AL = 20,42mm

LIO Holladay = 31,36D

20/06/06: Expl. Artisan + Faco OE

LIO SN60 AT $P_w = 31,0 \text{ D}$

Rf. + 0,75 E 20/25

Cálculo do Erro Refracional

$$\text{True Lens} = (E \times 1,4) + I$$

$$= (0,75 \times 1,4) + 31 = \mathbf{32,05D}$$

$$\text{Erro US: } 31,79 - 32,05 = -0,26 \text{ LIO} = 0,18 \text{ Refr.}$$

$$\text{Erro IOLM: } 31,36 - 32,05 = -0,69 \text{ LIO} = 0,48 \text{ Refr.}$$

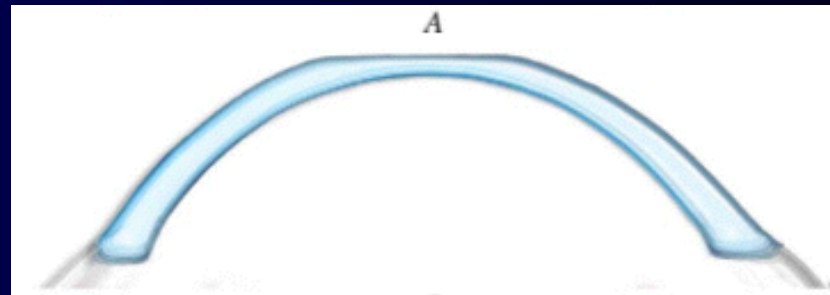
Conclusão

- O erro da Ecobiometria (0,18D) foi comparável ao do IOL Master (0,48D).
- A Ecobiometria com a fórmula de Hoffer para olhos bifácicos é um método satisfatório para cálculo da LIO.

Pós PRK / LASIK Miópico

Achatamento da superfície anterior

Aumento do valor relativo da curvatura posterior
(+ aumento da curvatura posterior por ectasia limitada)



Fator raio p/a
< 82,2%

Ceratômetros e topógrafos só medem a superfície anterior

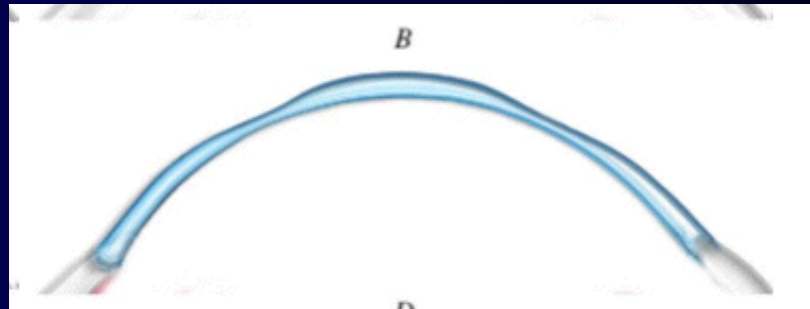


Hiperestimulação da Ceratometria

Pós LASIK Hipermetrópico

Encurvamento da superfície anterior

Diminuição do valor relativo da curvatura posterior



Fator raio p/a
> 82,2%

Ceratômetros e topógrafos só medem a superfície anterior

→ **Hipoestimação da Ceratometria**