

Micro Incision PRELEX (MIP) with ACRILISA 366 D (Acritec)

100 PRELEX



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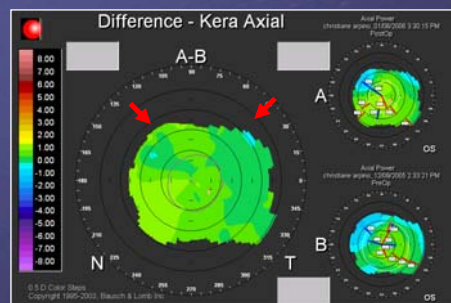
RECENT EVOLUTIONS IN MODERN CATARACT SURGERY

- 1 - Micro-incision and bimanual surgery (1,4 - 2 mm)
 - Control of induced astigmatism +++
 - Crucial for multifocal implantation
- 2 - Optical biometry
 - Highest precision
 - Clear lenses
- 3 - Diffractive optics and new materials
 - New generation IOLs (high compressibility)
 - Efficient, high quality of vision (asphericity, diffractive optics)
 - Good contrast sensitivity, low visual disturbances
- 4 - Correction of presbyopia:
 - refractive lens exchange through 1.5 mm
 - Change our conception of cataract surgery
 - Refractive surgery of the crystalline lens
 - New concept:
 - MICS + MICS MULTIFOCAL IOL + PRELEX
 - = Micro-Incision Prelex: M.I.P.

1 – Control of astigmatism

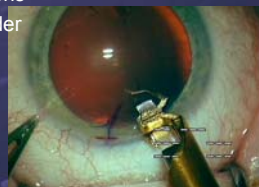
- Avoid induced astigmatism
- Correct pre-existing astigmatism
- Interest of MICS
 - Bi-manual phaco or coaxial MICS
 - Through 1,5 mm to 2,0 mm
 - Surgery and implantation
 - Lowest induced astigmatism : 0,2 d

EFFECT OF BIMANUAL COUPLE MICRO INCISIONS 1,5 mm

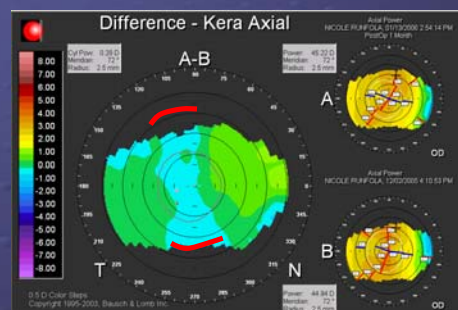


PRE EXISTING ASTIGMATISM

- Limbal relaxing incisions +++
 - Pre-op topographic analysis
 - Simple nomogram
 - RK knife or pre-set depth (600 microns)
 - Constant depth 600 microns
 - Length varyng with cylinder



RELAXING INCISION ASSOCIATED WITH BIMANUAL CATARACT SURGERY



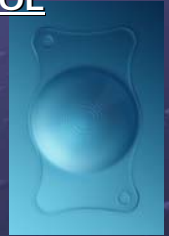
Emmetropia necessary

- Post-op ametropia
 - Must disappear
 - Related to biometric measurements
 - Interest of optical biometry +++
 - Highest precision ++
 - Clearest lenses
- Secondary treatment of ametropia
 - exceptional



ACRI.LISA 366 D IOL for micro-incision

- One piece IOL
 - Hydrophilic acrylic
 - Hydrophobic surface
 - Overall length :11 mm
 - Optic size : 6 mm biconvex
 - No angulation
 - Square edges optic and haptics
 - Not an ultra-thin iol but highly compressible
 - Implantable through 1,5 mm
 - Fills all the quality criteria of a modern iol

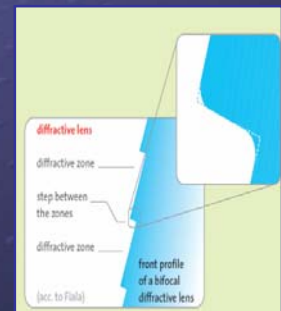
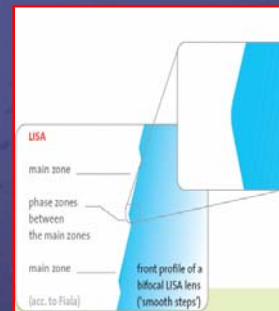


Multifocal IOL	Restor	Technis ZM001	Acri.Lisa
Lab	Alcon	AMO	Acri.Tec
Material	hydrophobic acrylic	hydrophobic acrylic	Hydrophilic lens with a hydrophobic surface treatment
Optic size	6-mm	6 mm	6-mm
Optic	Diffraction	Diffraction	Diffraction
Optic design	Mix OPTIC : diffractive on center and refractive on periphery at anterior face. Apodization Device	Light distribution 41% far 41 Near. Prolate anterior face :spheric Diffractive posterior face. PVDF haptics are C-shaped	Light distribution 65% far 35 Near. Independent from pupil size. Refractive-diffractive structure. Smooth steps in refractive-diffractive structure. Aberration correcting Incision < 2mm
A-Factor Optic	118.4	119.1	117.8
Power Addition IOL	+4,00 D (lens plane: +3,2D)	+4,00 D (lens plane: + 2,8D)	+4,00 D (lens plane: +3,2D)
Power	18,00 D to 25,00 D	5,00 D to 34,00 D	0,00 D to 32,00
Incision Size	2 to 2,2mm	2,8 mm	1,5 to 2,2 mm

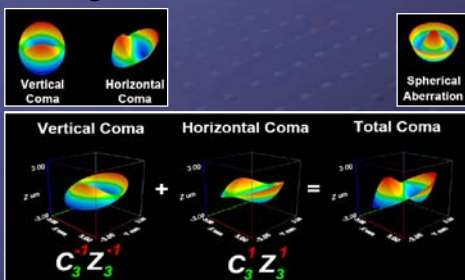
Diffractive Structure

Acri.Lisa

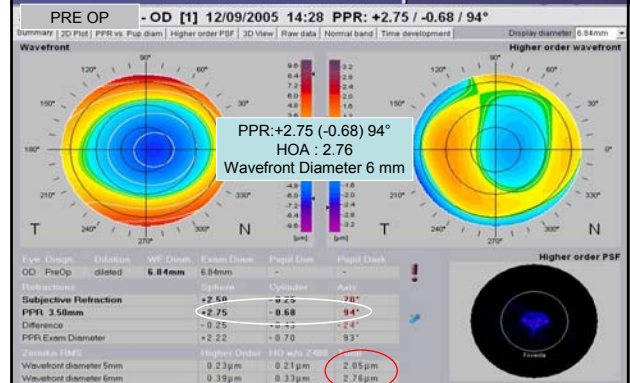
Other diffractive lenses

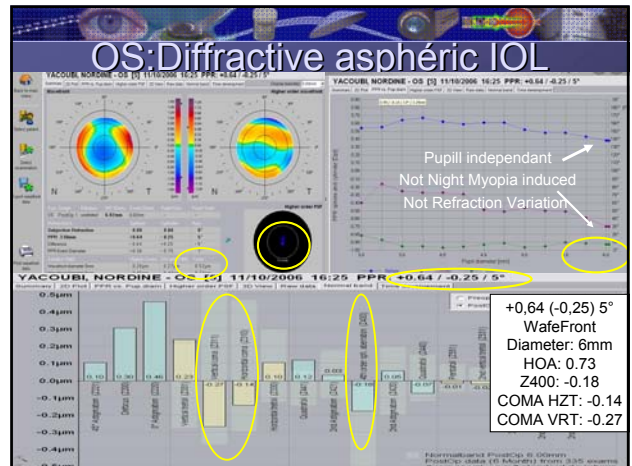
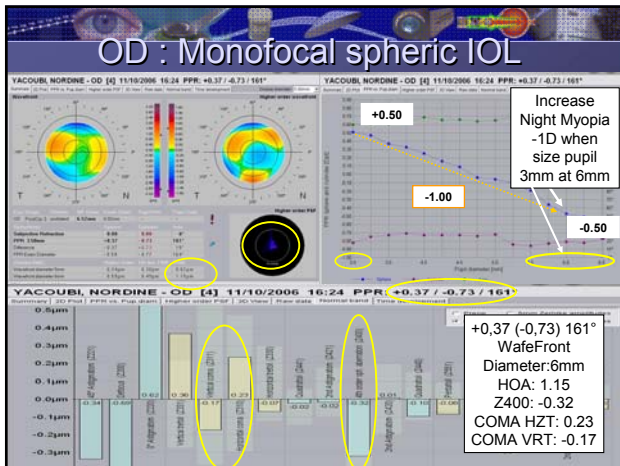
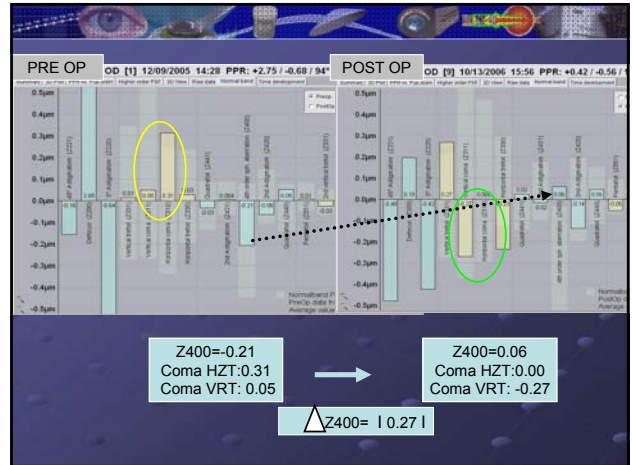
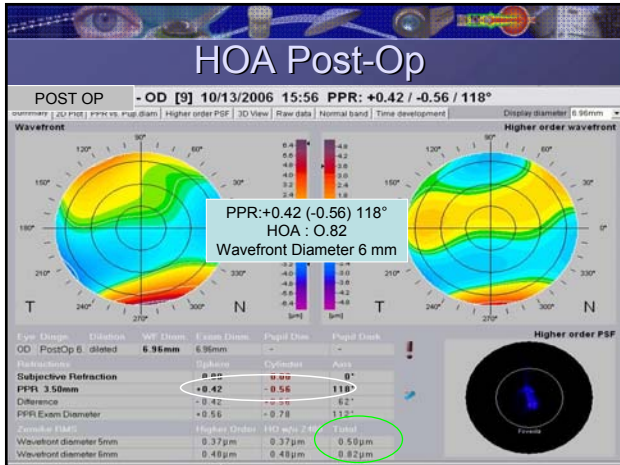


High Order Aberration



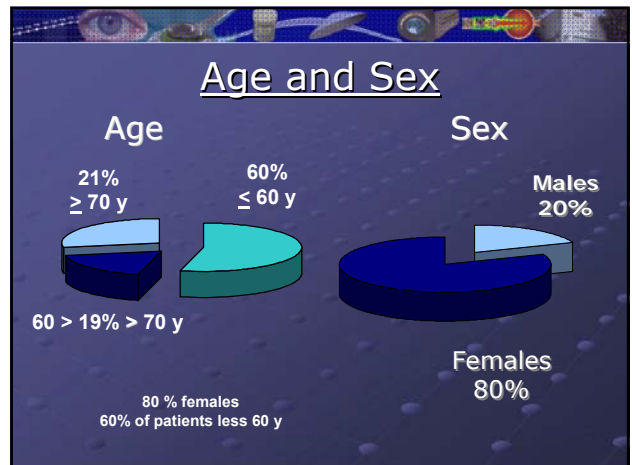
HOA Pre Op

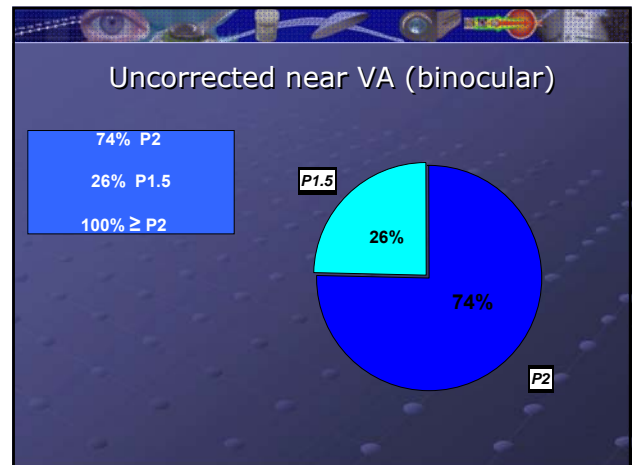
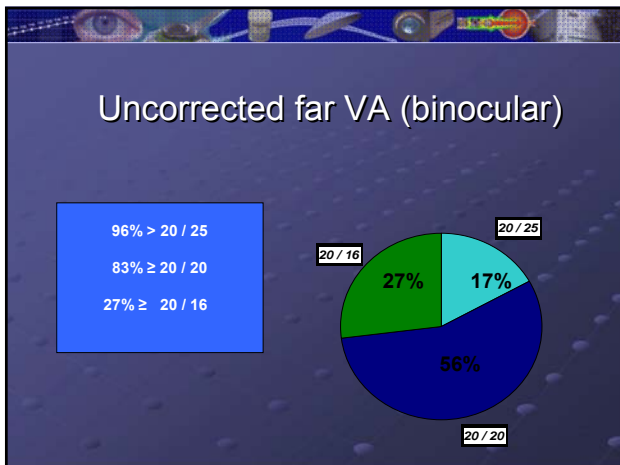
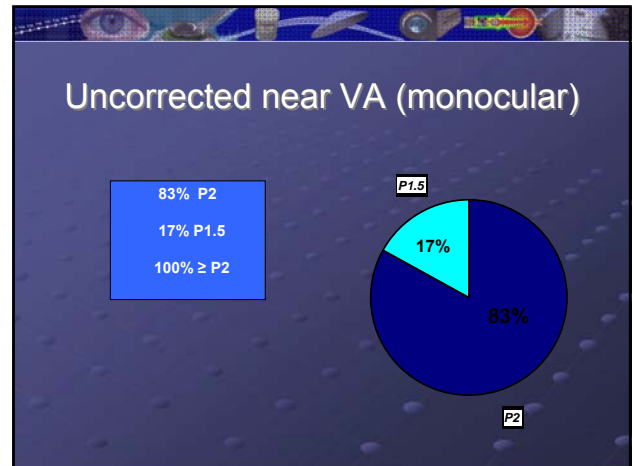
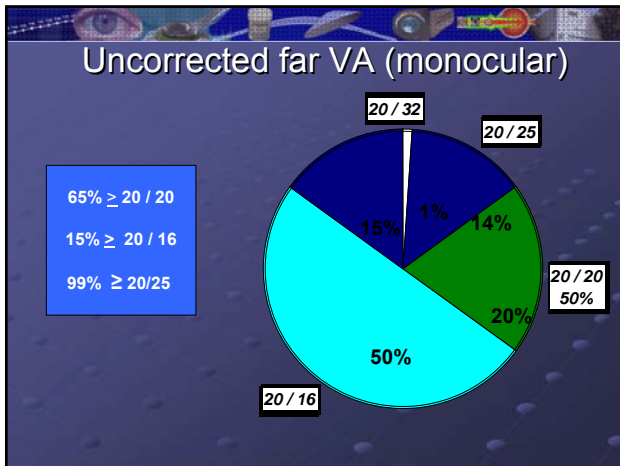
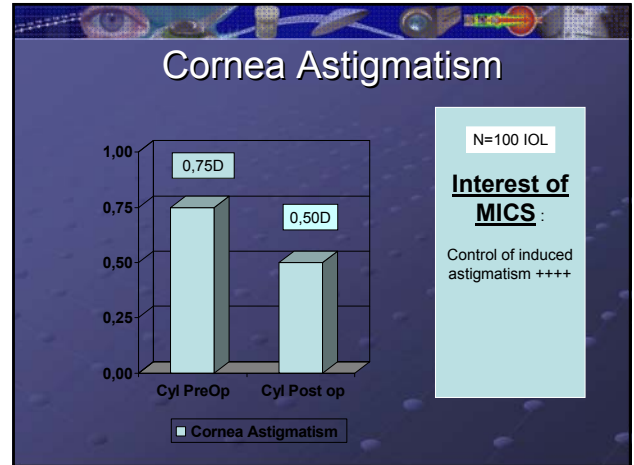
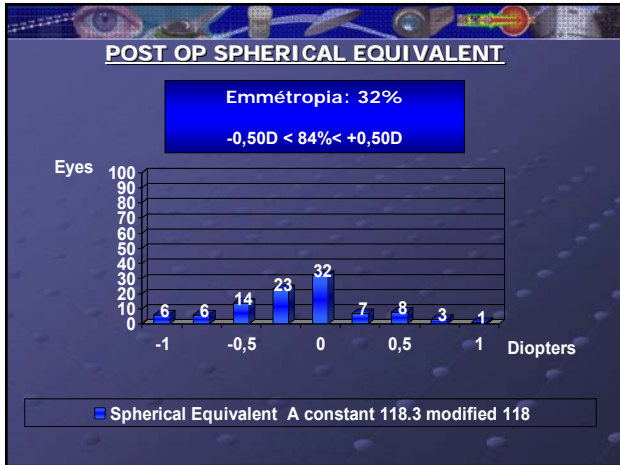


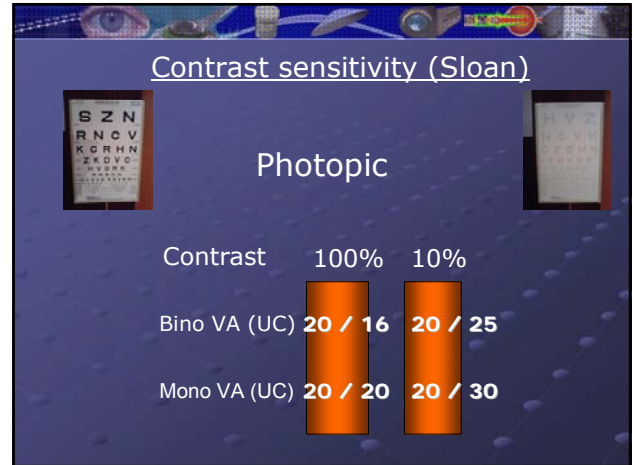
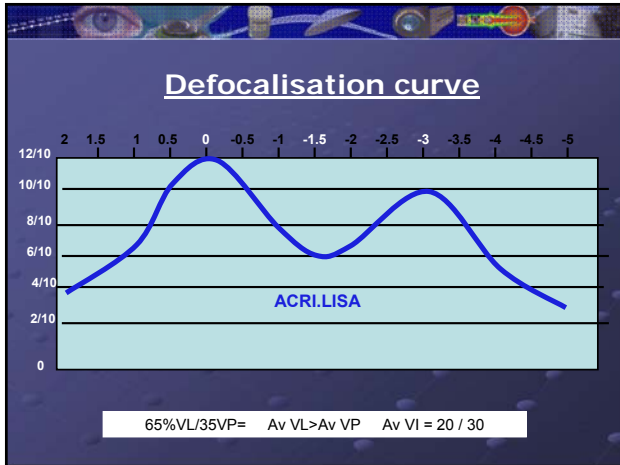


Material and methods

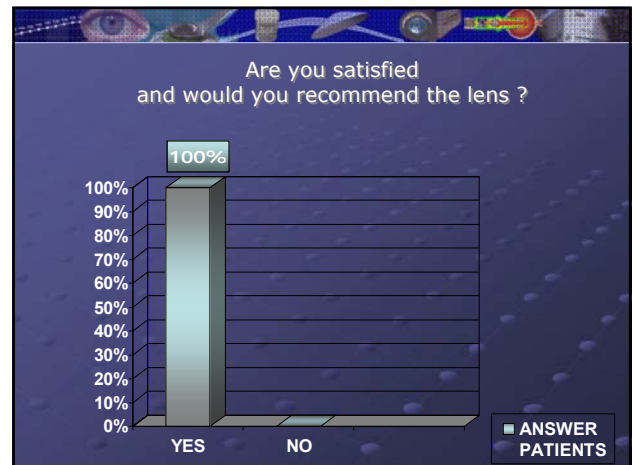
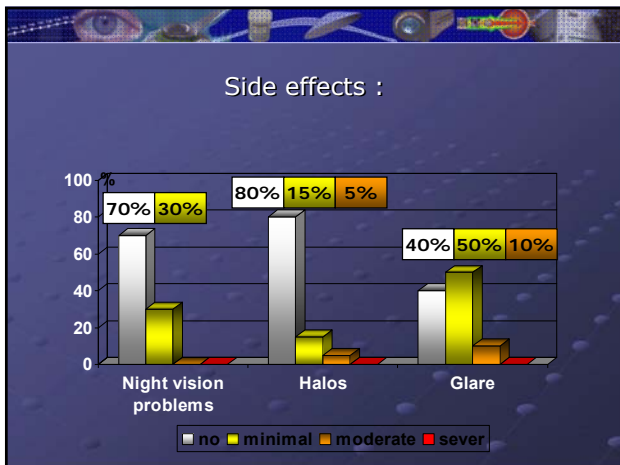
- 100 eyes, 50 patients
- Presbyopia, clear lens
 - Good potential VA
 - Patient > 45 years
 - Usual exclusion criteria
 - Follow up at least 1 month
 - Implanted IOL-Power Mean 20 D (range: 17 to 26D)
- Bimanual surgery
 - (micro incision ≤ 1.5 mm)
 - Implantation 1.5 mm
 - Regular corneal astigmatism
 - entre 0 et 2.0 D
 - Surgical correction when >1,00 D
 - Limbal relaxing Incisions







- ### QUALITY OF LIFE: EVALUATION
- Do you need glasses ?
 - For far distance
 - For intermediate (computers)
 - For near distance
 - Do you experience side effects ?
 - Glare, halos, night vision problems
 - Would you recommend the lens ?



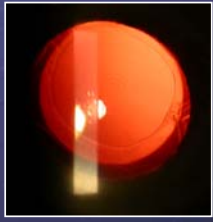
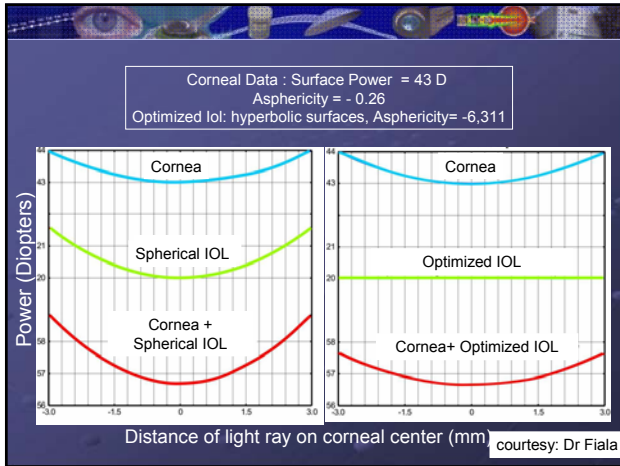
Conclusion

Micro Incision Prelex : M.I.P

- MICRO INCISION PRELEX in selected patients bilaterally implanted with ACRILISA through 1,5 mm incision and combined astigmatic surgery when needed
- Excellent VISUAL RESULTS
 - VL 96% \geq 20 / 25 or more
 - VP 100% \geq P2
 - Good intermediate vision
 - Good Contrast sensitivity
- Very low rate of side effects
 - Night vision
 - Glare
 - Halos
- MIP: Real refractive surgery of the crystalline lens
- Longer follow-up
 - Rate of secondary cataracts and/or RD

Material and methods

- 100 eyes, 50 patients
- Presbyopia, clear lens
 - Good potential VA
 - Patient > 45 years
 - Usual exclusion criteria
 - Follow up 6 months
 - Implanted IOL-Power Mean 20 D (range: 17 to 26D)
- Bimanual surgery
 - (micro incision \leq 1,5mm)
 - Implantation 1,5 mm
 - Regular corneal astigmatism
 - between 0 and 2,00 D
 - Surgical correction when >1,00 D
 - Limbal relaxing Incisions

typical corneal values:

surface power:
between 40 and 47 diopters
G. Smith et al, Vision Research 41 (2001), 235-243

asphericity:
 -0.26 ± 0.18
P.M. Kiely et al, Optica Acta, 29 (1982), 1027-1040

-0.18 ± 0.15
M. Guillon et al, Ophth. Physiol. Optics, 6 (1986), 47-56

cornea exhibits positive spherical aberration

