# **Trifocal IOL and LASIK**

**Theo Seiler** 

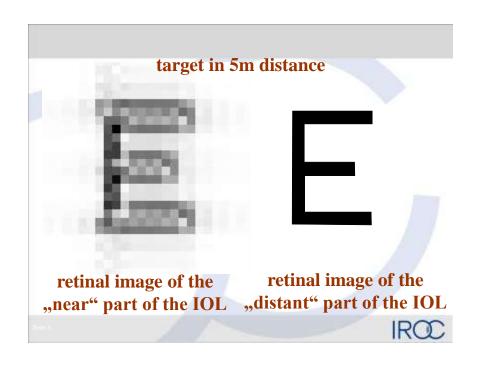
Institut für Refraktive und Ophthalmo-Chirurgie (IROC) and

University of Zürich

Zürich, Switzerland







The multifocal effect is widely independent of pupil size.

This is accomplished by small areas (d=1/10mm) inside the IOL with 3 different refractive powers ( $\Delta$ =3D).

Most mfIOL are apodized (more near in the center)



#### **Limits of mf IOL**

Side effects (glare and halos) overcome the benefits if

- the residual astigmatism 0.5D and less
- the spherical error 0.25D and less
- Anisometropia < 1D

This leads to  $\approx 15\%$  to 25% dissatisfied patients (low to moderate satisfaction)



Retrospective study (2015 and 2016)

213 eyes with mfIOL in 108 patients

**Type of implanted IOL: Fine vision (Physiol)** 

42 patients (56 eyes) were dissatisfied with their vision

Satisfaction score (1:not to 4:totally) was 2.1



### Retrospective study (2015 and 2016)

Patients asking for refractive improvement at least in 1 eye (median 6month) 42 (39% of cases)

56 (26% of eyes)

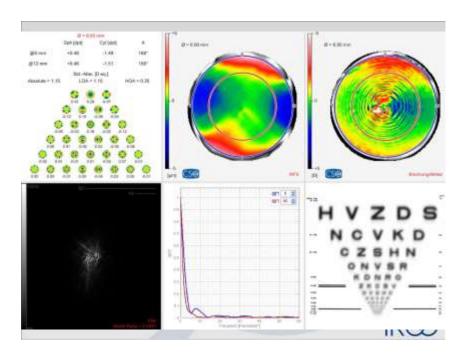
Refractive reasons: astigmatism 62%

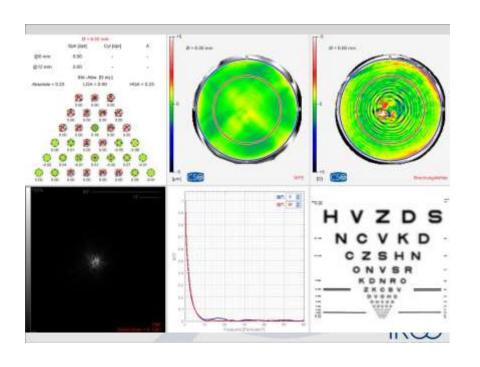
myopia 45%

hyperopia 20%

HOA>0.5μm 12%





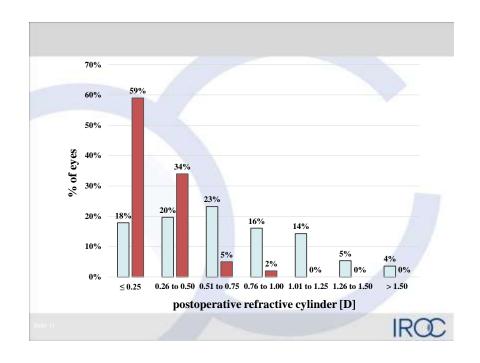


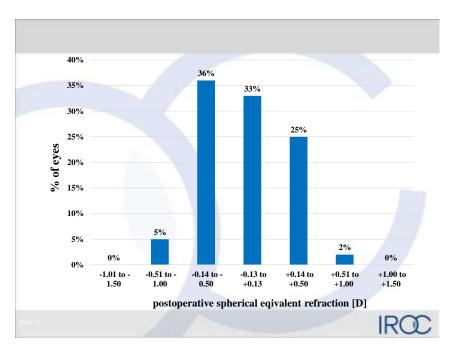
# Retrospective study (2015 and 2016)

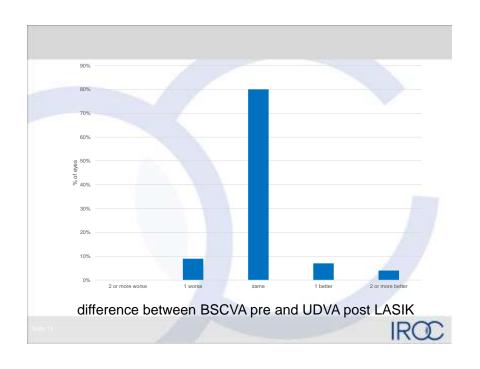
**Satisfaction score (1:not to 4:totally)** 

- increase from 2.1 to 3.6
- 38 of the 42 patients would choose the procedure again









#### **Economic considerations**

If you offer a LASIK «for free» you will have to calculate the additional costs

- costs of femto-LASIK (minimal) 1500 CHF
- LASIK in 26% of the eyes
- extracosts per mfIOL 1500x0.26 = 390 CHF



### **Conclusions**

- Because the satisfaction rate of mfIOL alone is only75% it is recommended to offer a package
- The package includes the mfIOL and a LASIK "for free" to correct residual refractive errors
- At IROC, this package calculates well if the additional costs of 390 CHF are added to the costs of the mfIOL+FLACS

