LASIK WITH THE
ZIEMER FEMTO LDV Z6
AND HOW IT COMPARES TO
THE OTHER FEMTO LASERS

DR CORDELIA CHAN  FRCSEd

MEDICAL DIRECTOR & SENIOR CONSULTANT
INTERNATIONAL SPECIALIST EYE CENTRE

VISITING SENIOR CONSULTANT
REFRACTIVE SURGERY SERVICE
SINGAPORE NATIONAL EYE CENTRE
SINGAPORE

FINANCIAL DISCLOSURES

Alcon
Allergan
Bausch & Lomb TechnoLas

My Femtosecond Laser Experience
(LASIK)

IntraLase iFS
150kHz
(AMO)
Since early 2008: FS60
2013: iFS (150kHz)

VisuMax
500kHz
(Carl Zeiss Meditec)
Since late 2008

Femto LDV Z6
(Ziemer)
Since Oct 2013

Wavelight FS200
(Alcon)
Since Sep 2014

Victus
(TechnoLas
Perfect Vision)

Since Oct 2013

THE ZIEMER FEMTO LDV Z6

C Chan, FRCSEd

Femto cataract only
ADVANTAGES

• Compact
• Great portability
• Sits nicely next to any excimer laser platform
• Capabilities
  – Flaps
  – Pockets
  – Cornea grafting

DISADVANTAGES

• More preparation for nursing staff
• “Transformers” style articulated arm: Clumsy
• No visualization of femtosecond pass through the microscope
• Relatively long treatment time (25s)

NURSING PREPARATION

ZIEMER LASIK: PRACTICAL POINTERS
PEARLS

• Positioning of patient’s head is crucial
  – To get good appplanation and full meniscus,
    maximal access to the eye must be attained
  – Always turn head nasally (away from the
    handpiece)
  – Move chin up or down

PEARLS

• Use lid retractors with small brackets
  – Thorlakson Z-LASIK speculum

PEARLS

• Cornea must be moist to prevent excessive
  OBL
• Sclera must be dry for better suction
• Use fixation light of excimer laser, but turn
  microscope illumination off

POSITIONING OF HAND PIECE

• Hold hand piece horizontally when
  appplanating
• Centre black point inside the suction ring
  area
PEARLS

• Always check for vacuum stability before cutting
• During cutting, hold handpiece horizontally and do not press down on the eye  
  – Avoid blocking the venting channels
• Remember to re-align the head before excimer laser ablation

ZIEMER LASIK

INITIAL DIFFICULTIES

• Getting good applanation and that full meniscus  
  – Moving the patient’s head rather than moving the eye  
  – Pressing down too hard unnecessarily
• No visualization of femtosecond pass through the microscope  
  – Everything is on the screen
## Final Thoughts on the Ziemer

- Very portable
- Cuts good flaps
  - Easy lifts
  - Smooth stromal bed
- Reasonable for small eyes
- Less subconjunctival hemorrhage than IntraLase
- Slow: Long treatment time

### Is There an Ideal FemtoSecond Laser for LASIK??

## The Ideal FemtoSecond Laser System
(For LASIK)

- Easy docking and applanation
- Easy centration
- Fast
- Smooth flap lift
- Smooth / pristine stromal bed
- Customizable flaps
- Low risk of suction breaks
- Comfortable for the patient
- No subconjunctival hemorrhage

## Intralase vs Visumax vs Ziemer vs Fs200

- Most comfortable / best experience for the patient
  - FS 200
- Easiest docking and applanation
  - VisuMax
- Most difficult for small Asian eyes
  - IntraLase
- Smoothest stromal bed / flap lift
  - IntraLase / FS200 (Kymionis et al Br J Ophthalmo 2014: Comparable smoothness)
- Most stromal adhesions
  - VisuMax
- Better for squeezy / teary patients
  - IntraLase / FS200
- Most likely to cause subconjunctival hemorrhage
  - IntraLase
THANK YOU