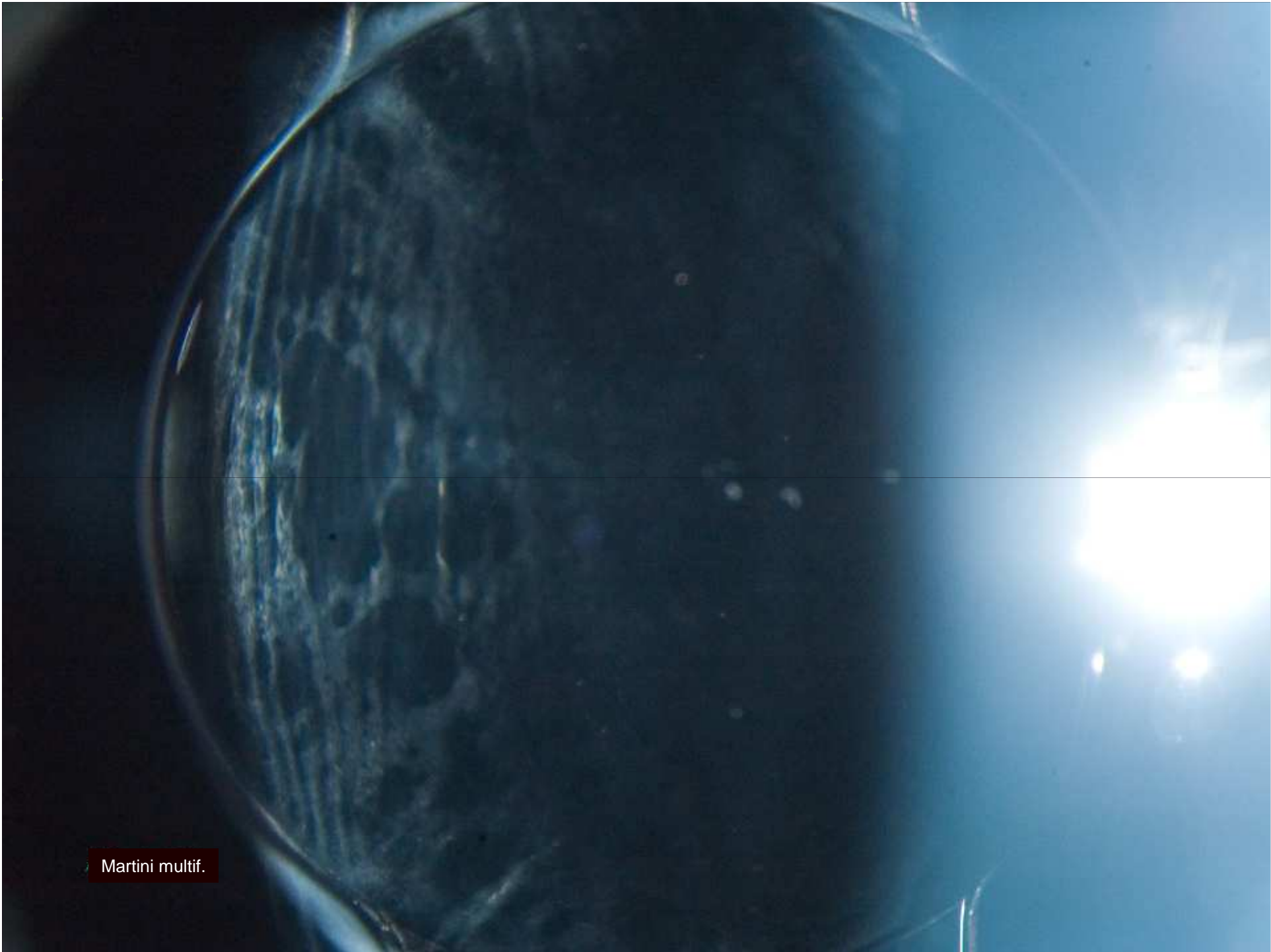


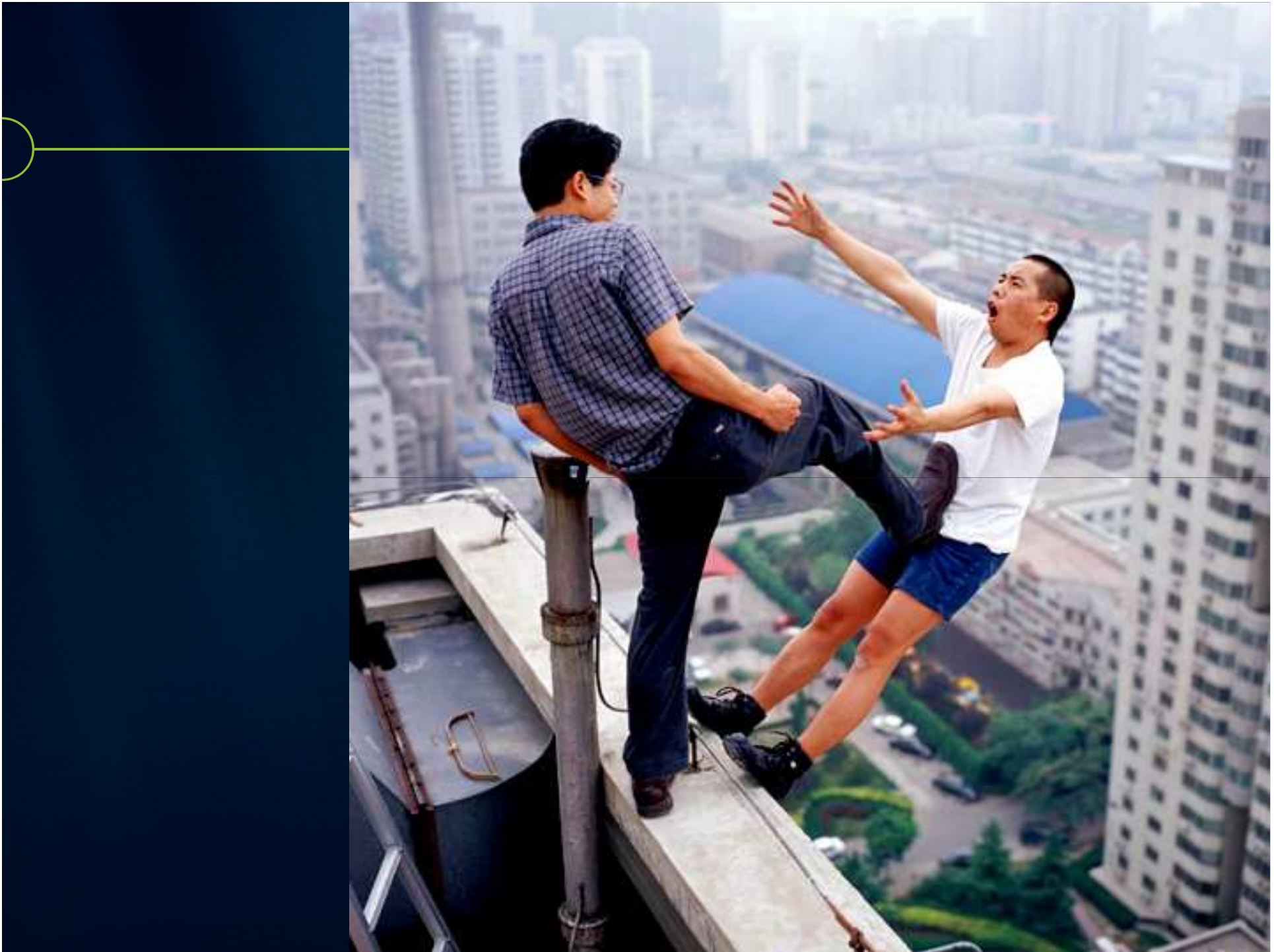
**Discomfort oculare dopo chirurgia
della cataratta: ruolo specifico dei
sostituti lacrimali**

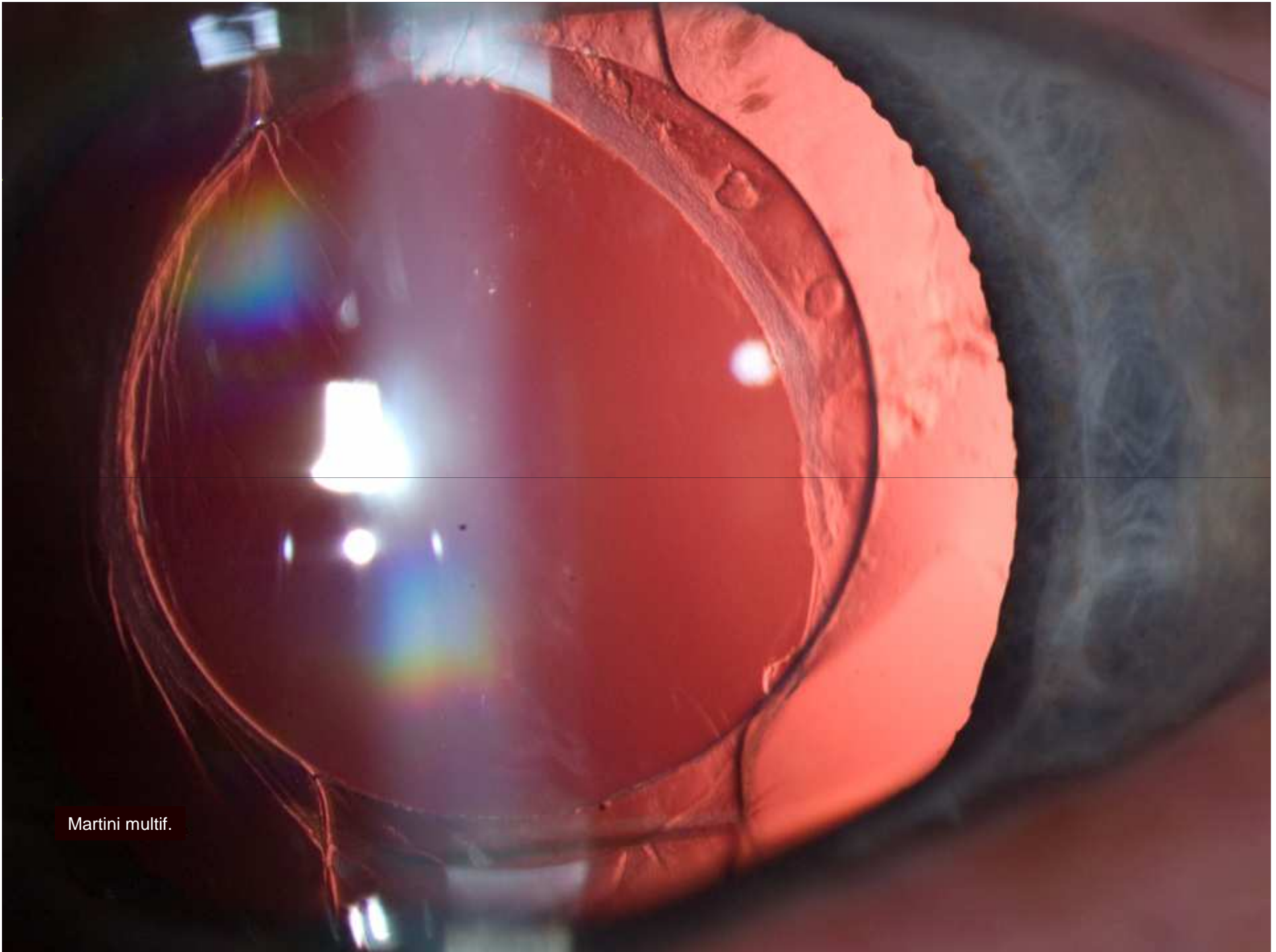


Maurizio Rolando

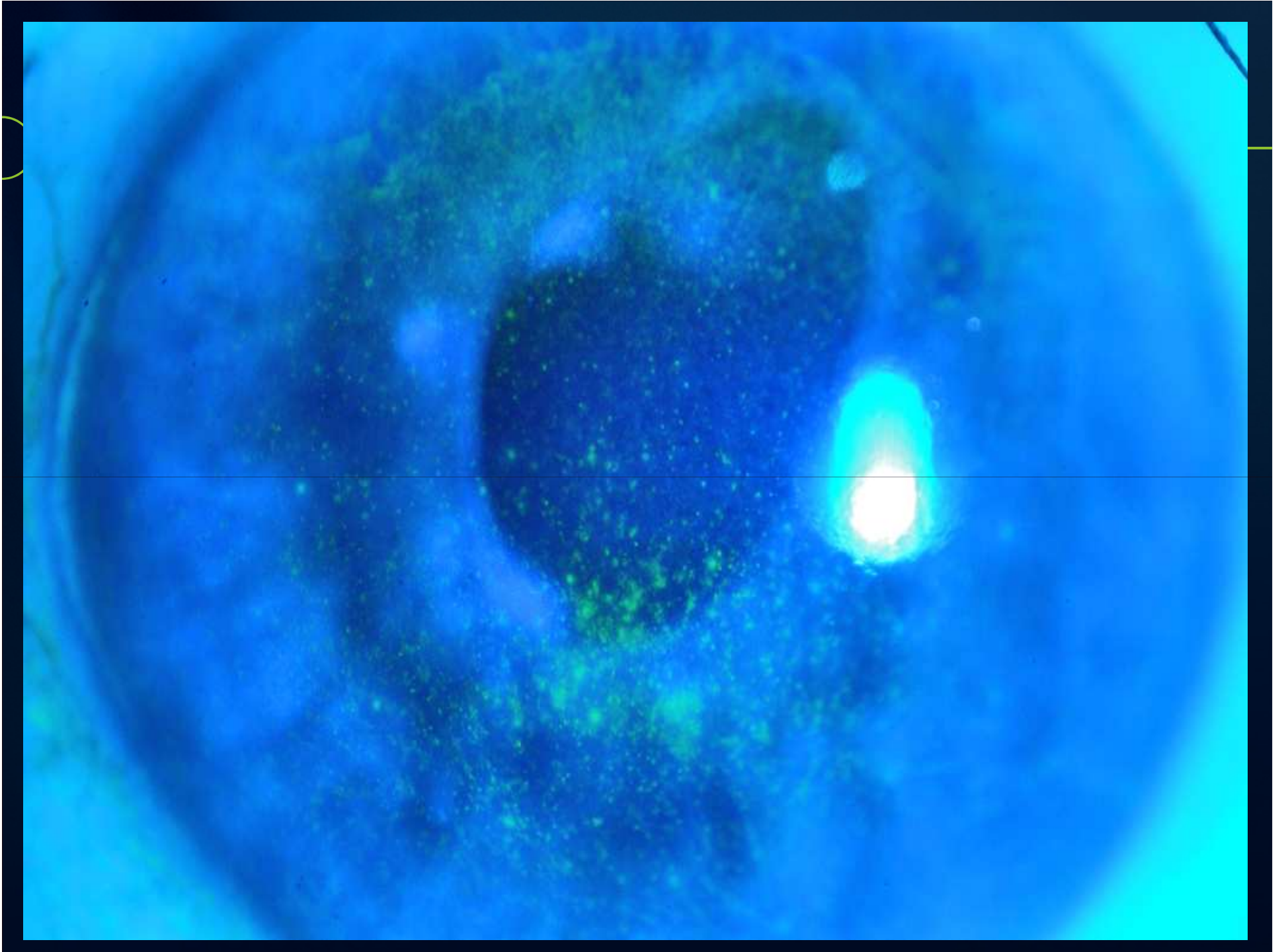


Martini multif.

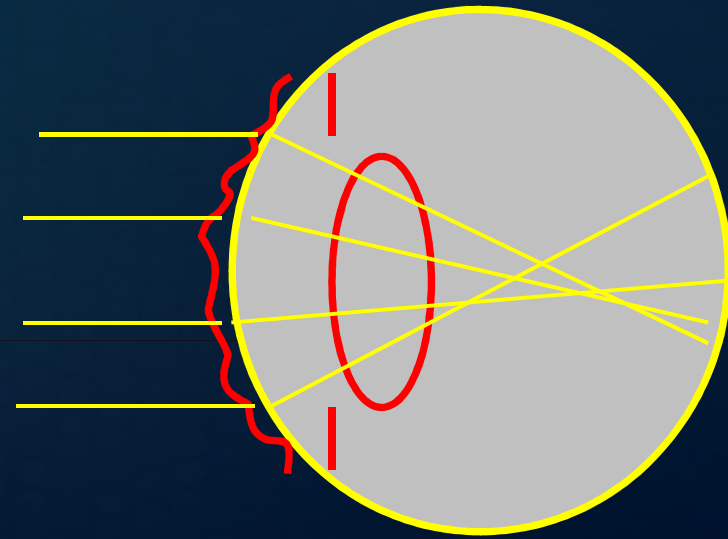
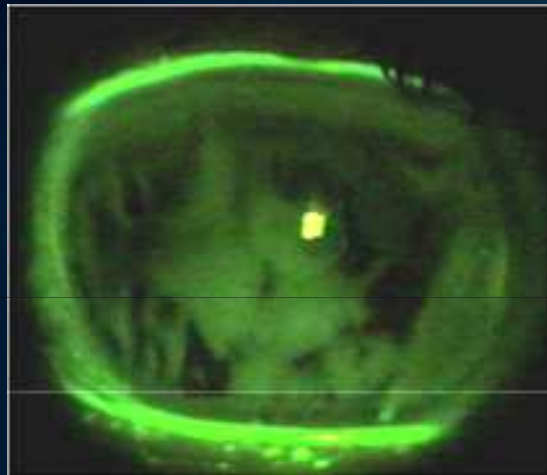




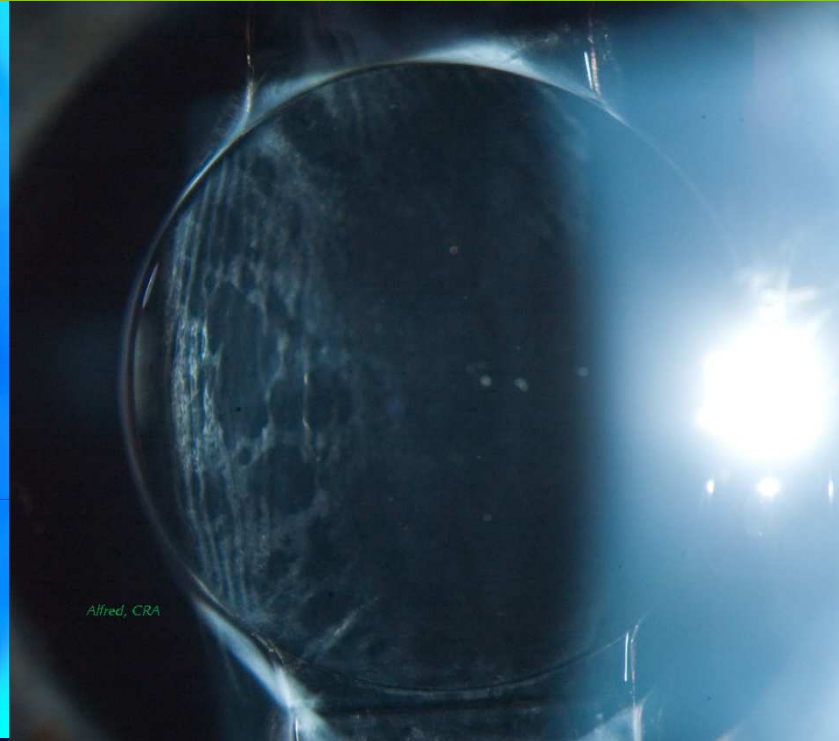
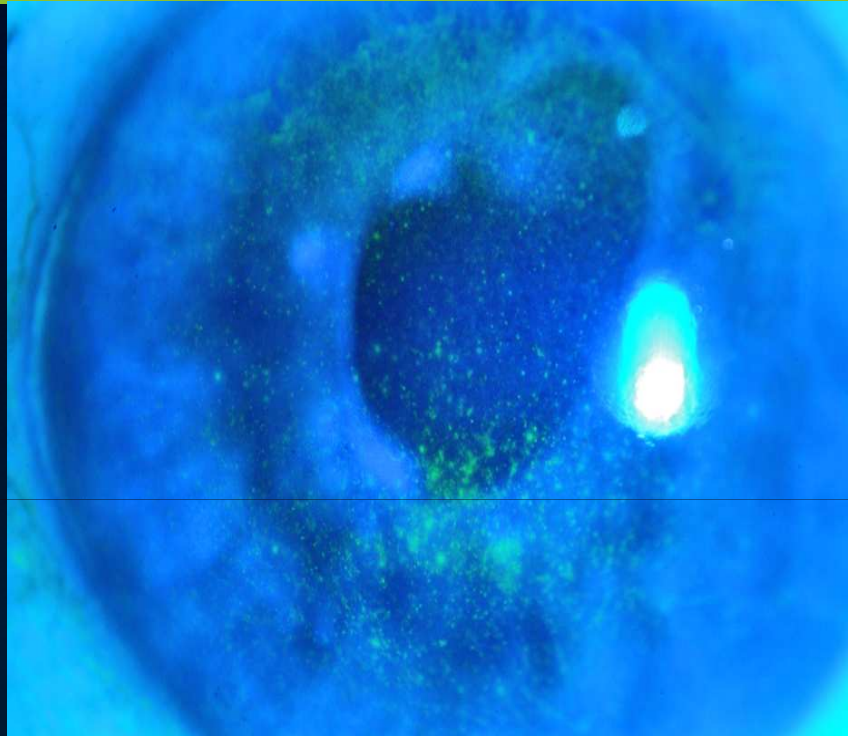
Martini multif.



Origine delle basse performances visive



- L'interfaccia aria lacrime è il diotro più importante
- La superficie oculare pre corneale è responsabile di 2/3 del potere ottico totale



Strategie di gestione

- capsulotomia YAG laser?
- sostituire la IOL?
- *Ottimizzazione della superficie oculare*

Eye Investigation of Dry Disease and Analysis of the Pathogenic Factors in Patients after Cataract Surgery Li, Xue-Min; Hu, Lizhong; Hu, Jinping; Wang, Wei Cornea: October 2007 - Volume 26:16-20

Purpose: To study dry eye and analyze pathogenic factors in patients after cataract surgery.

Methods: A total of 37 patients (50 eyes) were studied by using a 25-item National Eye Institute Visual Function Questionnaire (NEI-VFQ25) and Ocular Surface Disease Index (OSDI) 3 days before and 1 week, 1 month, and 3 months after cataract surgery. Slit-lamp microscope examination, cornea and conjunctiva fluorescein staining, tear breakup time (BUT), Schirmer test I (STI), and impression cytology (IC) were carried out at the same time. Cytologic specimens for IC were obtained from the upper lid-covered region, explosive region, and lower lid-covered region of the globe conjunctiva. The average density of goblet cells on these 3 regions was measured, and the pathogenic factors of dry eye after cataract surgery were analyzed.

Results: **After cataract surgery, the incidence of dry eye increased dramatically;** NEI-VFQ25 and OSDI indicated that most patients developed this symptom after surgery. The lacrimal river line became narrow, and BUT and STI decreased in patients after cataract surgery. IC suggested the presence of serious squamous metaplasia in the epithelial layer of the globe conjunctiva, especially the lower lid region.

Conclusions: Dry eye can develop or deteriorate after cataract surgery if not treated in time. Misuse of eyedrops is one of the major pathogenic factors that causes dry eye after cataract surgery. **Eyedrops should be carefully administered before and after cataract surgery** to avoid or reduce the occurrence of dry eye postoperatively

Tear film changes after phacoemulsification

Liu Z, Luo L, Zhang Z, Cheng B, Zheng D, Chen W, Lin Z, Yang W, Liu Y, Zhang M, Xiao Q, Chen J.
Zhongshan Ophthalmic Center, Sun Yat-sen University, Guangzhou 510060, China. zuguol@yahoo.com

METHODS: This prospective randomized study involved 68 consecutive patients with age-related cataract (79 eyes) who underwent phacoemulsification.

RESULTS: At 1 day and 2 days postoperatively, **the mean tear break-up time reduced greatly**, and the number of patients who showed III to V tear film pattern, the mean S I t value, the height of tear meniscus and fluorescein staining scores increased significantly ($P < 0.001$ for day 1, $P < 0.005$ for day 2).

S I t value at 7 days postoperatively ($P = 0.831$) and the height of tear meniscus at 14 days returned to their preoperative values ($P = 1.000$).

The tear break-up time, corneal fluorescein staining scores and the grades of tear film pattern recovered at 30 days postoperatively ($P > 0.05$).

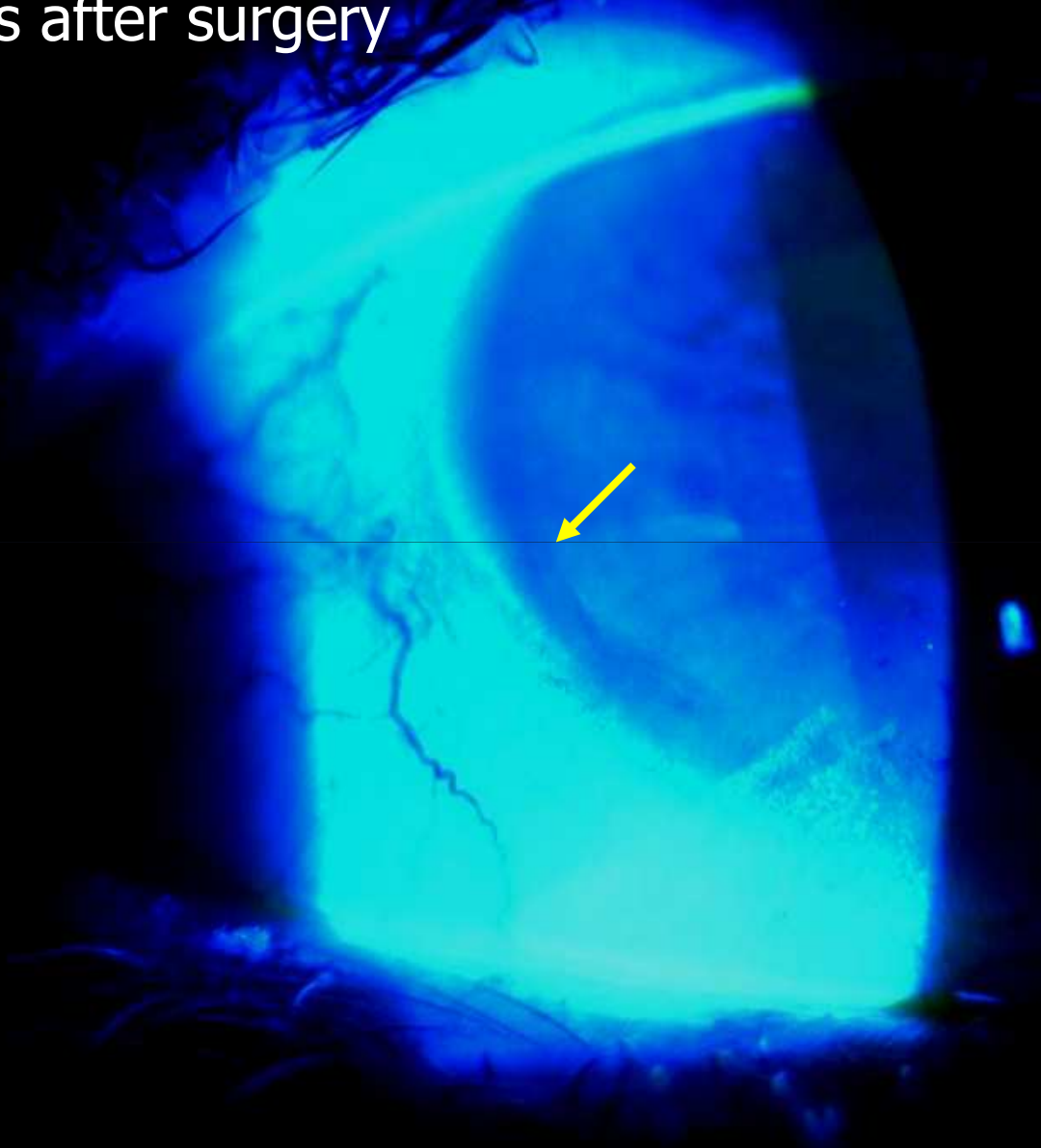
At 30 days postoperatively, 19.3% of patients showed shorter tear break-up time and less S I t value than that of preoperative day. In addition, 1/9 of the patients with normal preoperative tear film experienced dry eye at 30 days postoperatively.

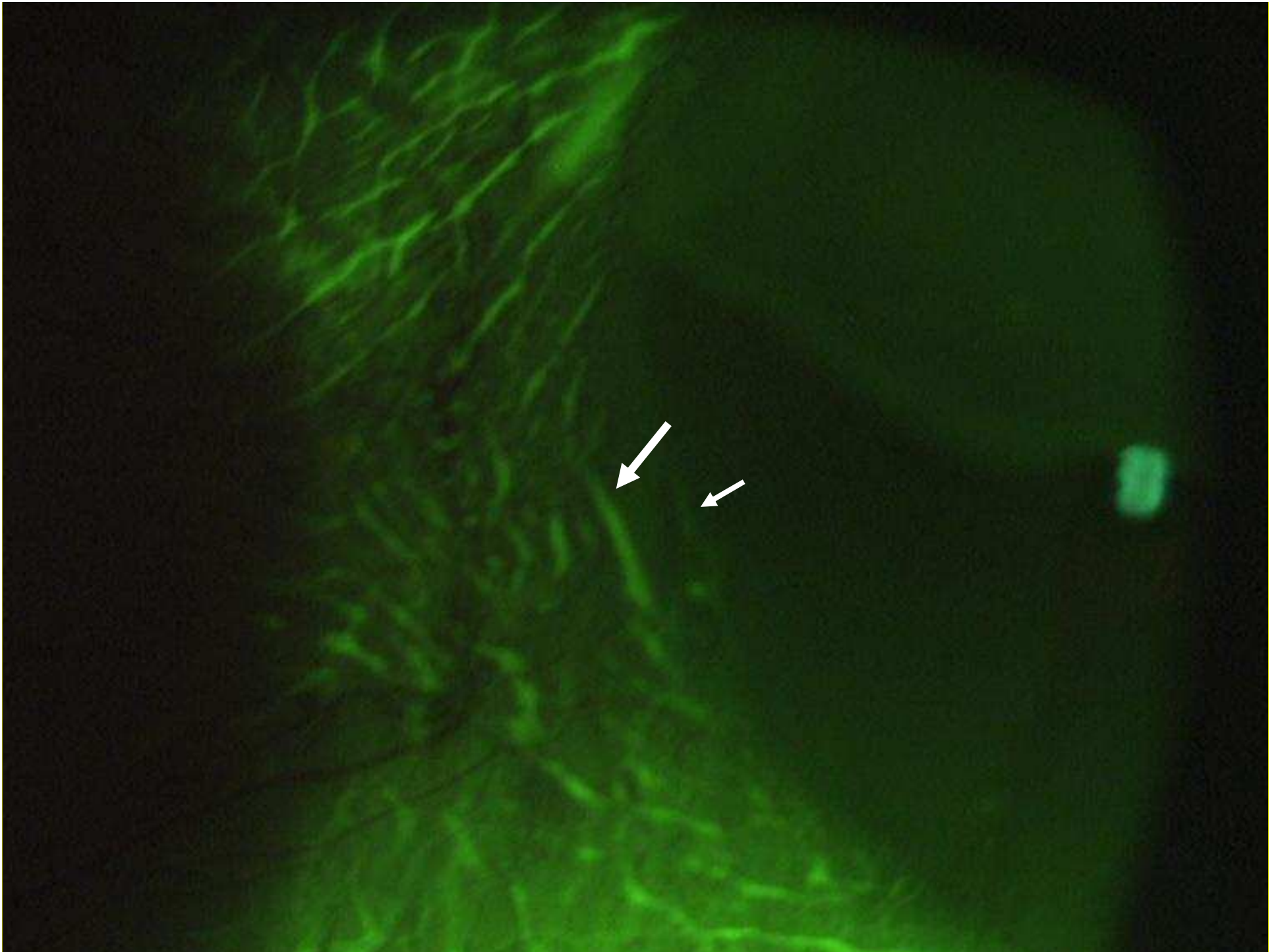
The cases with tear break-up time < 10 seconds compared to patients with tear break-up time ≥ 10 seconds were more easily to show tear instability postoperatively (relative risk 13.5, 8.25, 20.0, 39.0, 8.6, 3.9 at 1 day and 2, 7, 14, 30, 180 postoperative days, respectively).

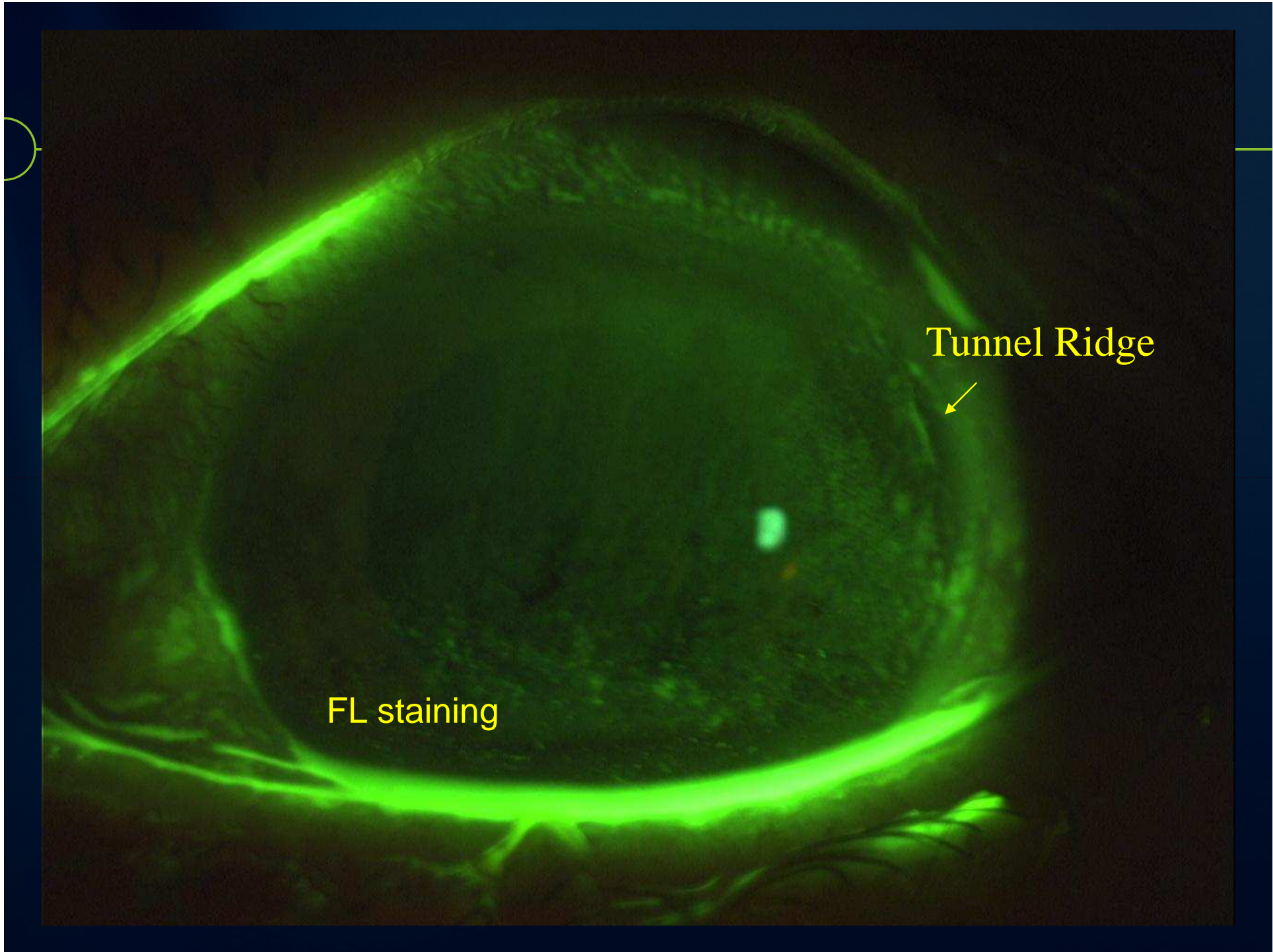
CONCLUSION: Phacoemulsification significantly alters the tear break-up time, S I t value, corneal fluorescein staining, tear film pattern and the height of tear meniscus.

Some patients with normal tear film may experience dry eye after surgery. Patients with preexisting tear break-up time < 10 seconds are easily at risk of experiencing the tear film instability postoperatively.

tunnel ridge.
35 days after surgery





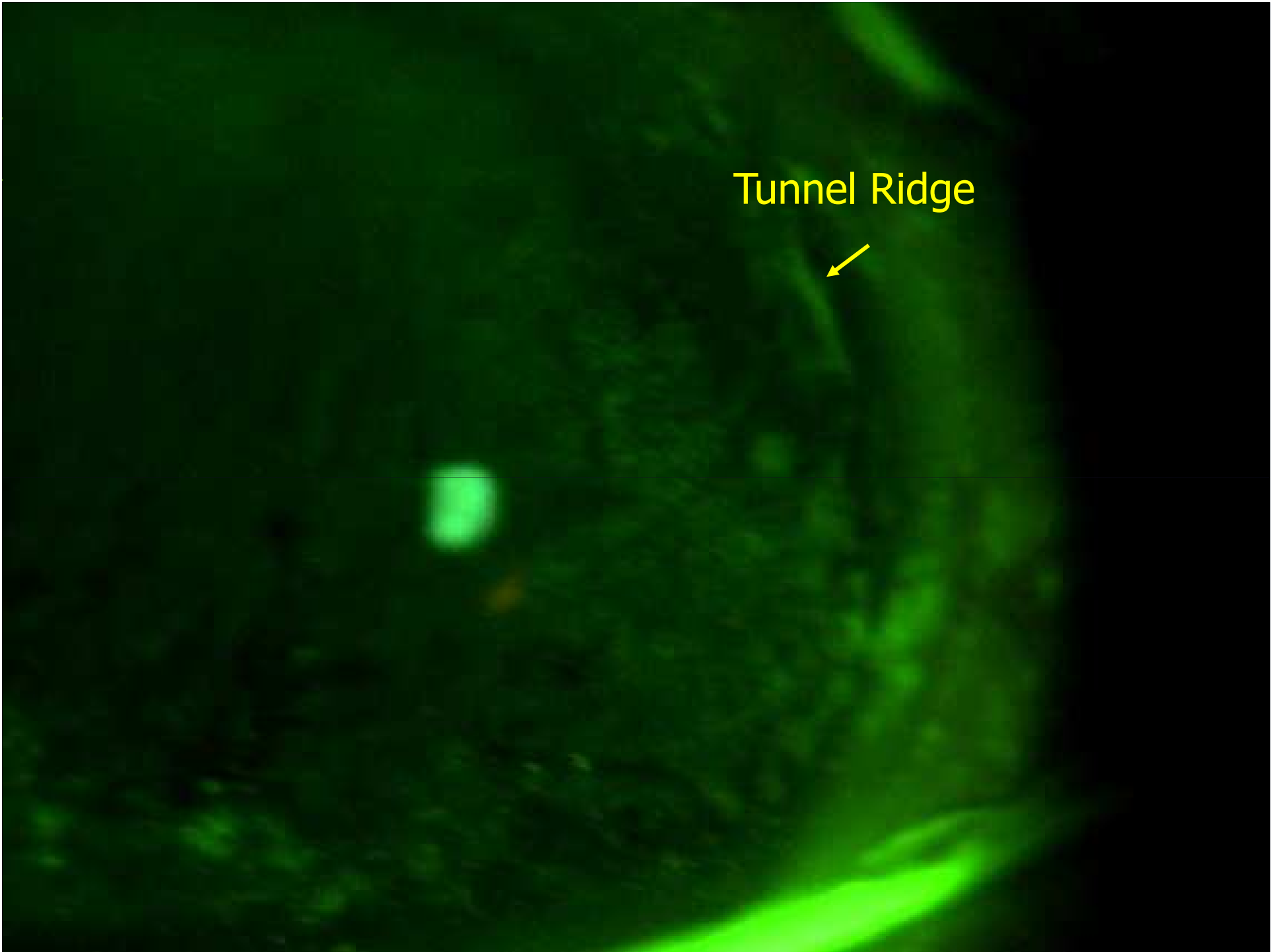


Tunnel Ridge



FL staining

Tunnel Ridge



Blefarostato

- Trauma sui tessuti muscolari palpebrali
- Ammiccamento incompleto
- Perdita della congruenza di congiuntiva e bordo palpebrale con la superficie bulbare
- Floppy eyelid syndrome



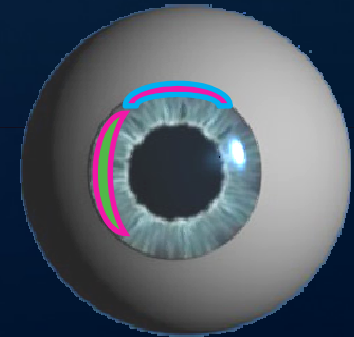
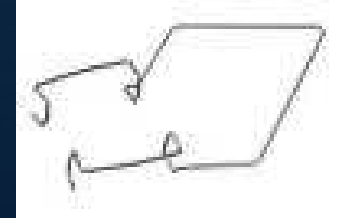
I sintomi di Disfunzione Lacrimale nel post-cataratta coinvolgono:

- pazienti già affetti da una patologia preesistente, con un peggioramento della sintomatologia
- pazienti precedentemente sani o senza evidenza di sintomi prima dell'atto chirurgico (circa il 10%)

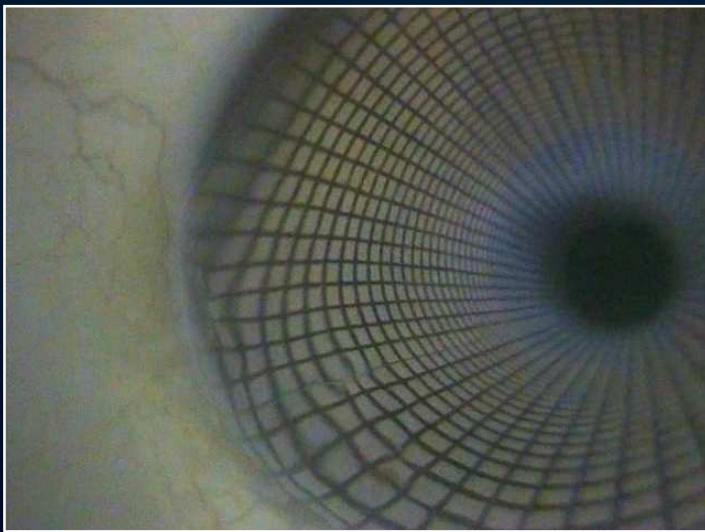
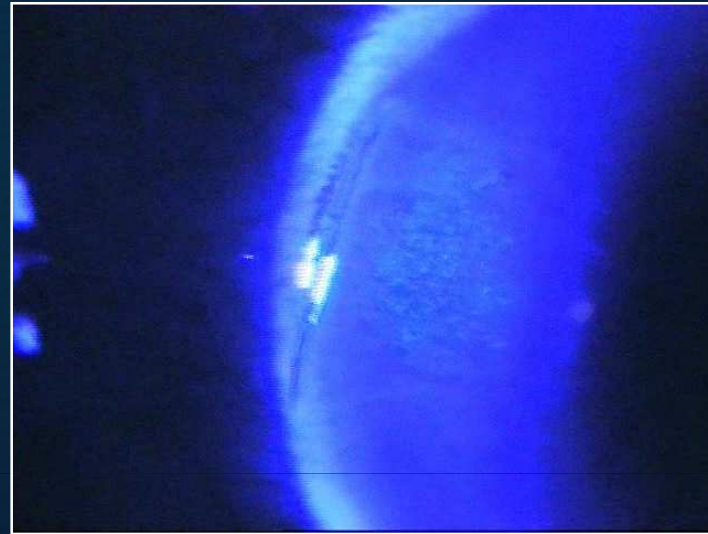
Liu. Z. et al 2002

Disfunzione lacrimale e cataratta

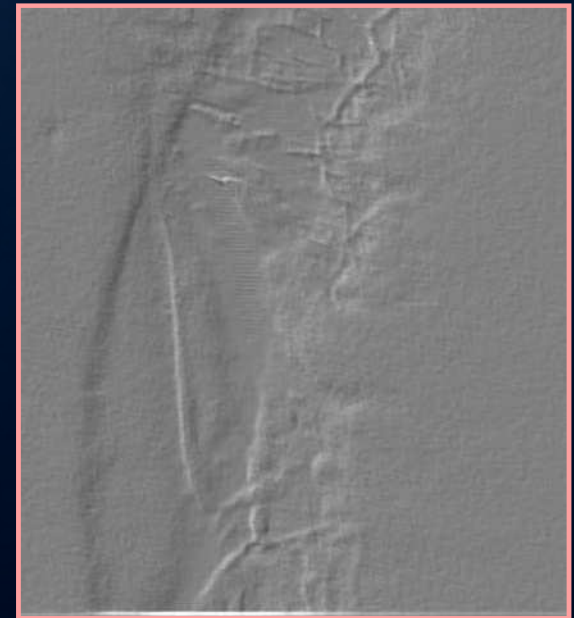
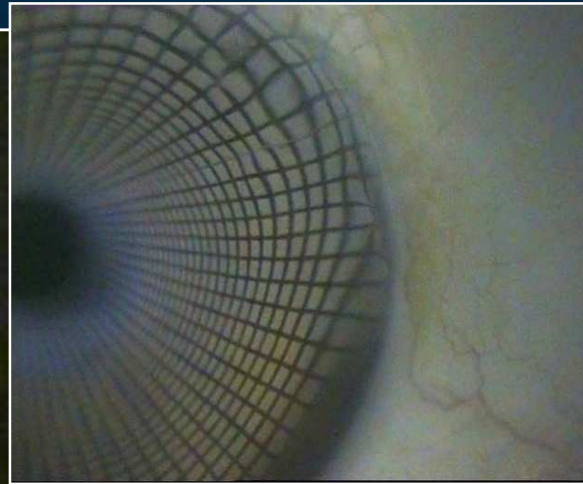
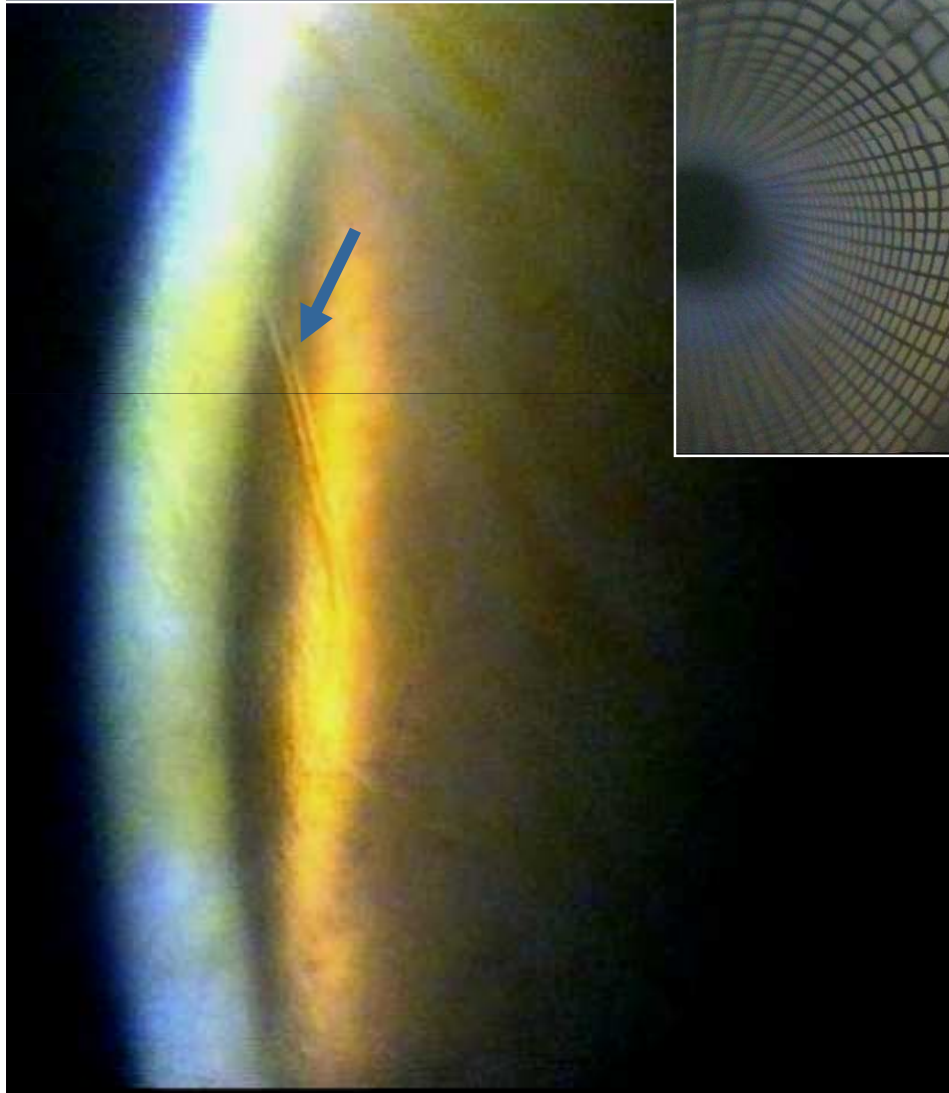
- Tossicità iatrogena
 - Da principi attivi,
 - Da conservanti
- Applicazione del blefarostato
- Incisione
 - Localizzazione
 - Morfologia del taglio
- Durata dell'esposizione alla luce del microscopio
- Durata del periodo di ultrasuoni
- Pre-esistenza di dry eye
- Presenza di patologie sistemiche (diabete, collagenopatie...)



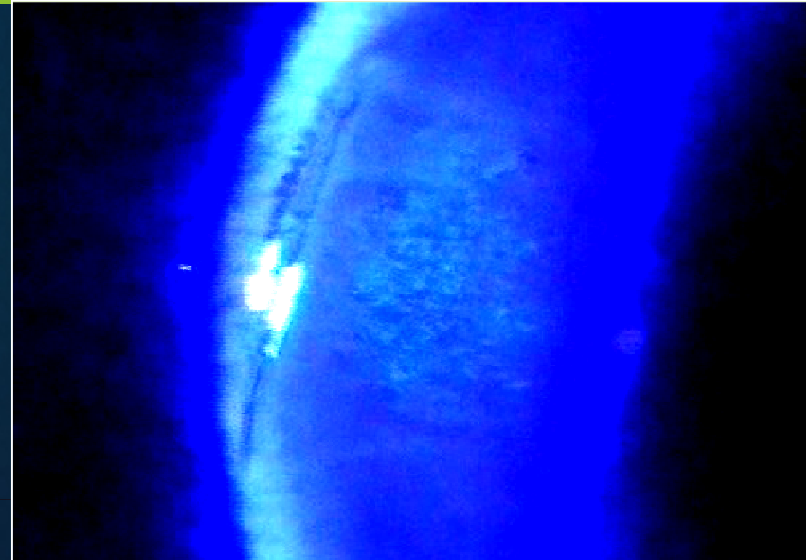
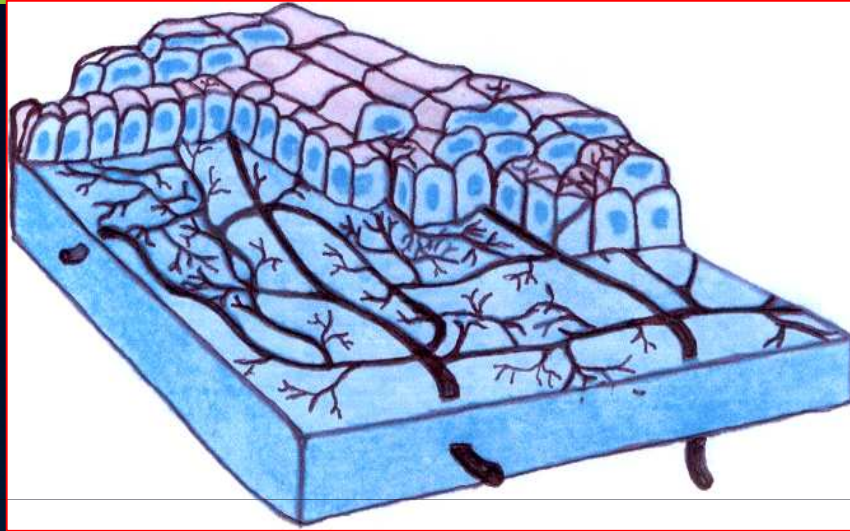
Irregolarità della superficie:



il disallineamento dei lembi della ferita chirurgica comporta
la non bagnabilità dell'area

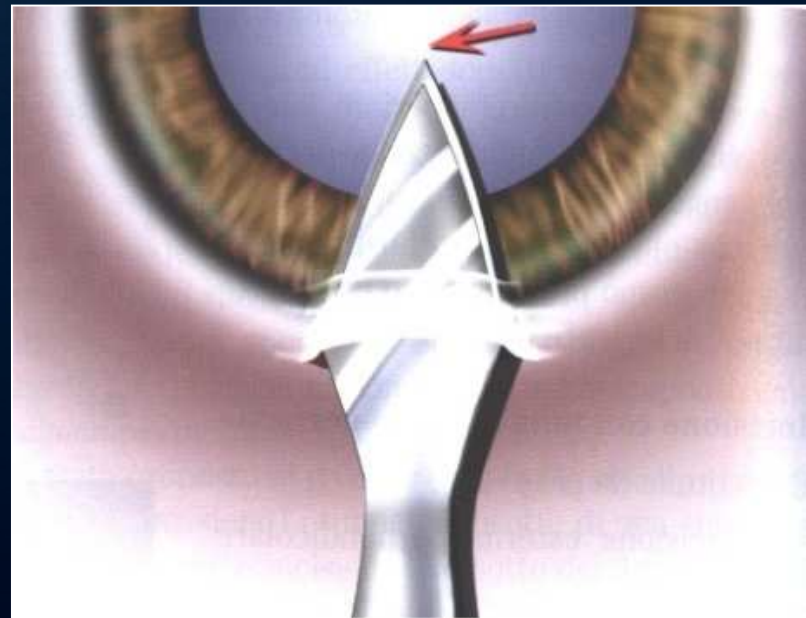


Compromissione dell'innervazione indotta dall'incisione



L'alterazione dell'innervazione corneale è responsabile di

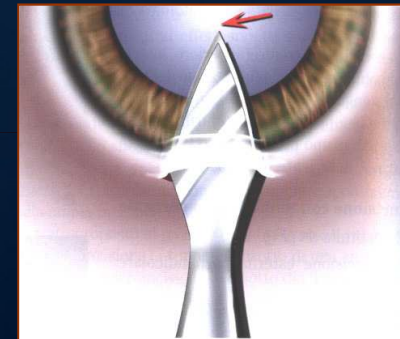
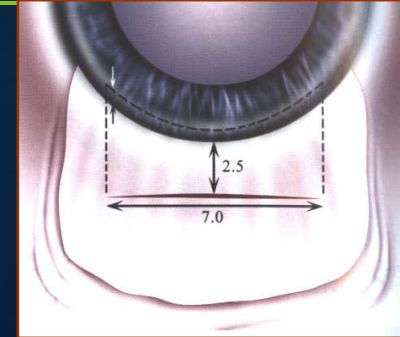
- un anomalo processo di cicatrizzazione,
- aumentata permeabilità epiteliale
- ridotta attività metabolica.



(Millodot 1984)

Incisioni

- Sclero-corneale
- Near clear cornea
- Clear cornea



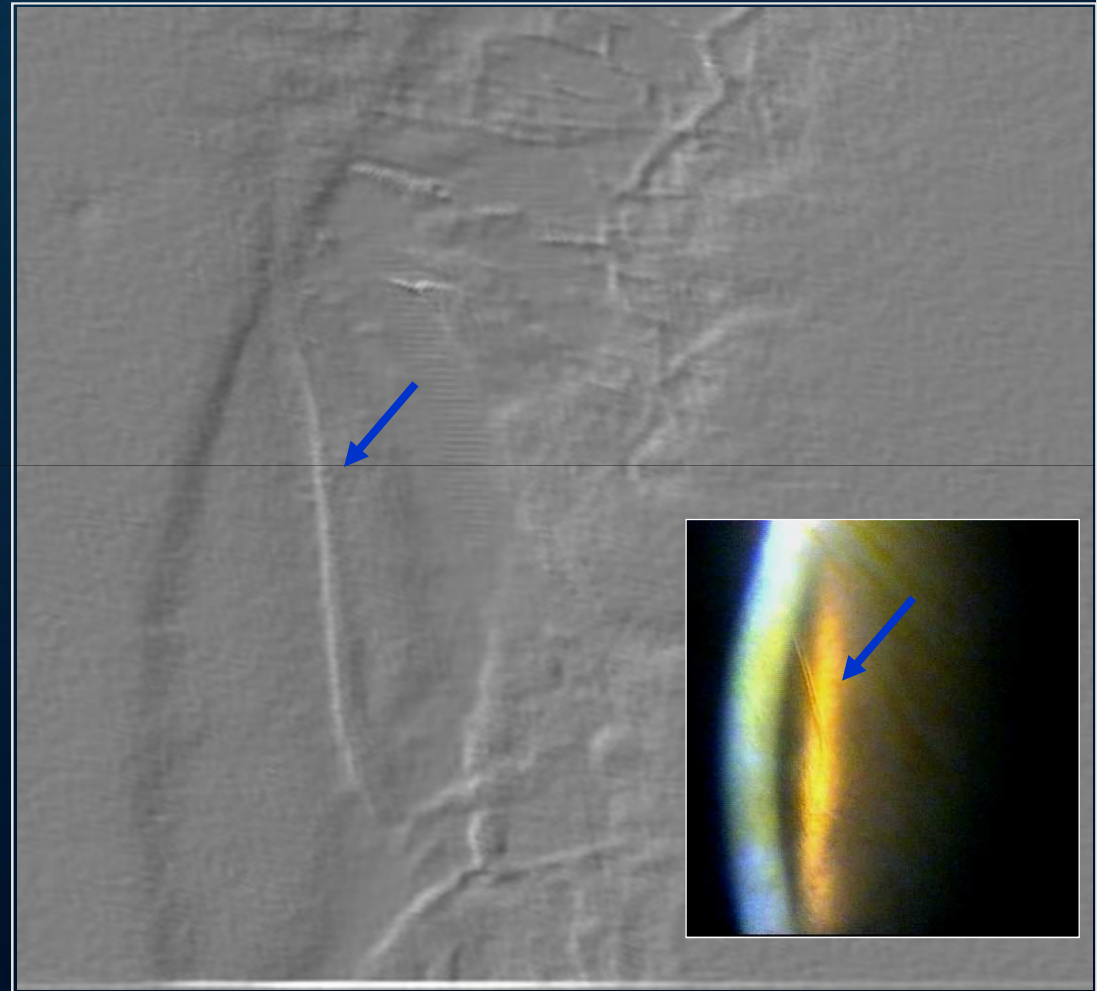
L'incisione sembra essere la principale responsabile delle sensazioni fastidiose che il 10 - 25 % dei pazienti lamentano dopo un intervento di cataratta.



Il primo taglio verticale, necessario alla costruzione del tunnel valvolato, se troppo demarcato o troppo profondo, potrebbe fare slittare verticalmente un lembo della cornea rispetto all'altro

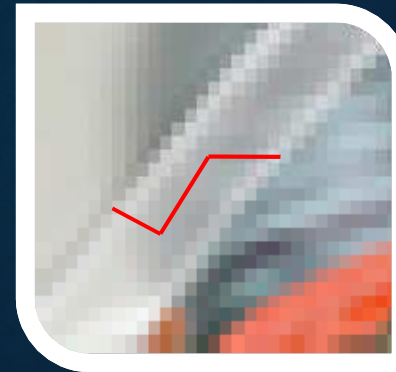
Questo fenomeno è accentuato dalla idratazione dei lembi della ferita che siamo soliti fare a fine intervento come idrosutura

Modeste alterazioni
sono colmate da
epitelio, ma maggiori
irregolarità
comportano
comunque un
disallineamento
superficiale dei lembi
incisi

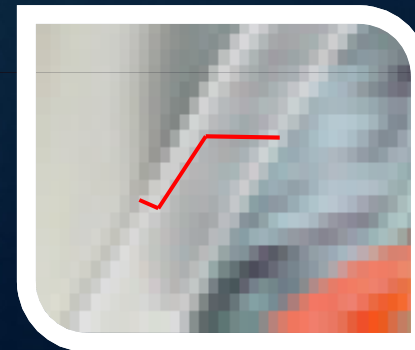


Incisioni Corneali per la Facoeulsificazione

Incisione con pretaglio
profondo



Incisione con pretaglio
superficiale



Incisione senza pretaglio





Post Cataract Tear Dysfunction

Courtesy of Dr. Vincenzo Orfeo

Tossicità da conservanti

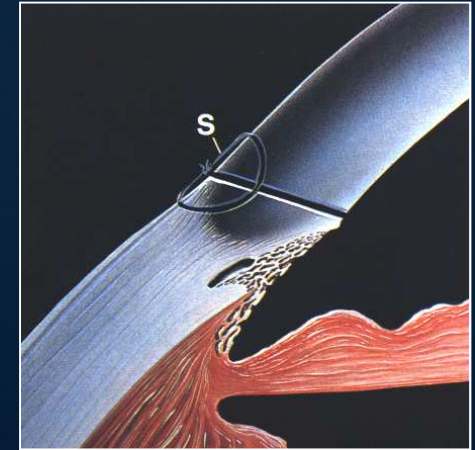
Il cloruro di benzalconio (BAK) determina un'alterazione del glicocalice già 30 minuti dopo la prima instillazione)*

(L'emivita media del BAK nella congiuntiva è di circa 12 ore !!!)

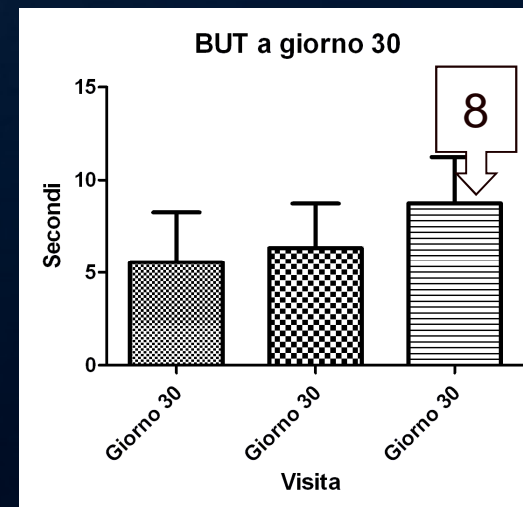
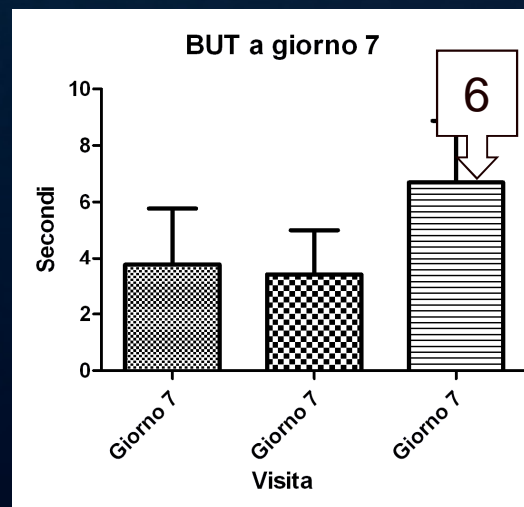
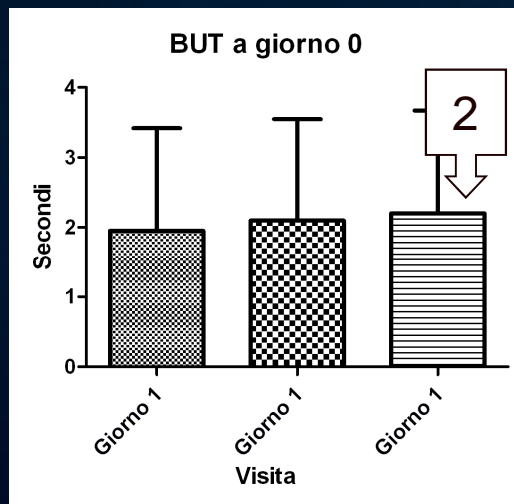
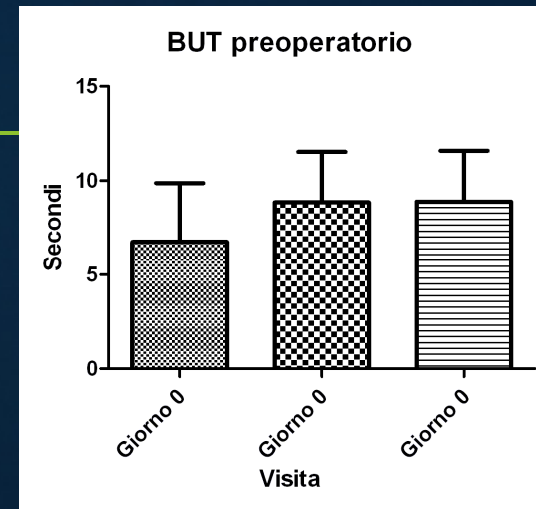
* Christophe Baudouin, Luisa Riancho, Jean-Michel Warnet, and Françoise Brignole In Vitro Studies of Antiglaucomatous Prostaglandin Analogues: Travoprost with and without Benzalkonium Chloride and Preserved Latanoprost

Disfunzione Lacrimale post intervento di cataratta

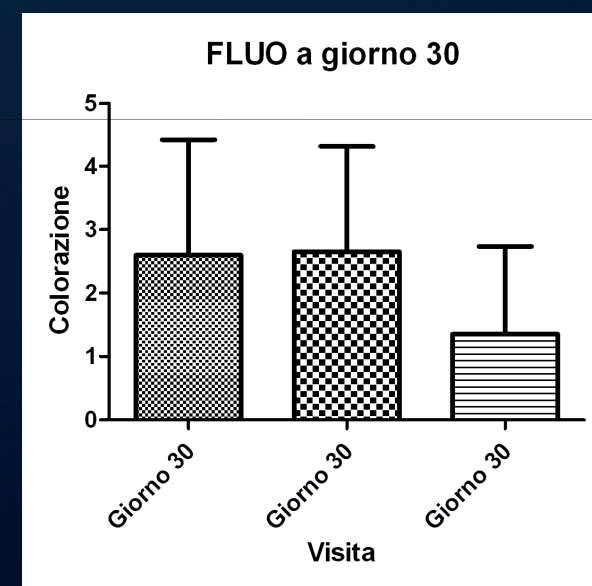
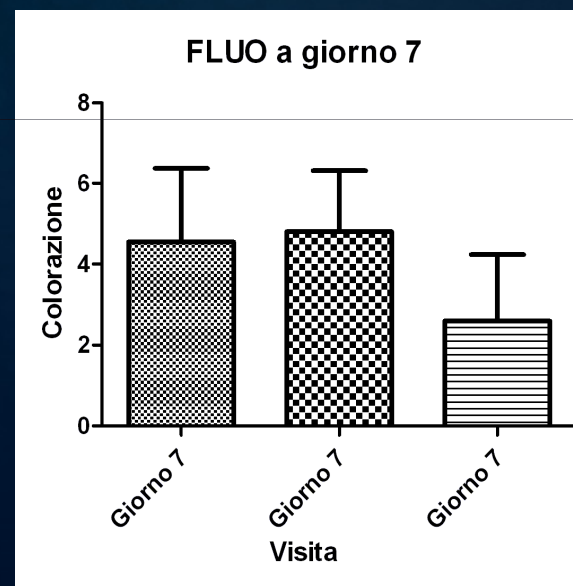
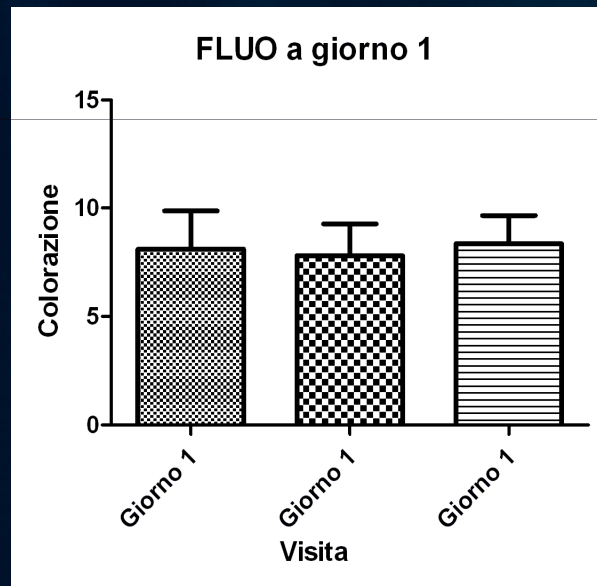
- Nella profilassi pre-operatoria (con antibiotici, fans...etc) è necessario utilizzare colliri senza conservanti.
- Utilizzare blefarostati non traumatizzanti e non ipertensionare l'apertura palpebrale
- Lateralizzare l'incisione corneale (evitando quando possibile i settori ad ore 3 e 9)
- Incisione senza pretaglio oppure con un pretaglio non profondo
- Apporre con cura i lembi corneali per evitare il disallineamento
- Se necessario utilizzare un punto di sutura per accostare i margini (l'eccessiva tensione del punto può creare affossamento)
- Ridurre i tempi chirurgici
- Regolare la luce del microscopio con l'intensità minima necessaria
- Informare il paziente della possibilità di avere sintomi da dry eye nelle prime settimane o mesi del postoperatorio
- Migliorare la lubrificazione e l'omeostasi lacrimale con sostituti lacrimali non conservati nel post-op



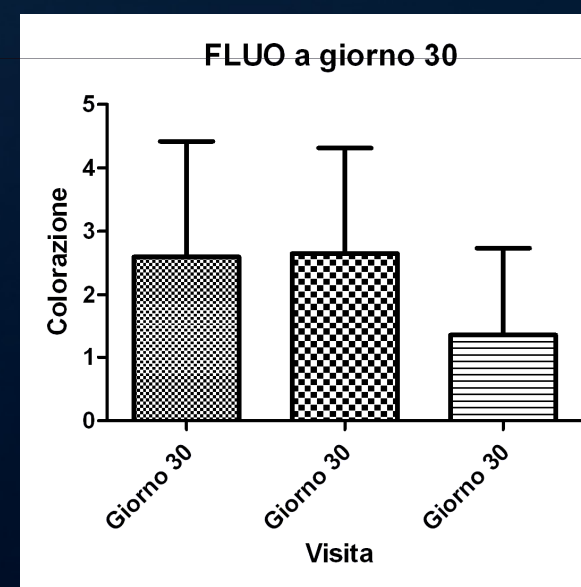
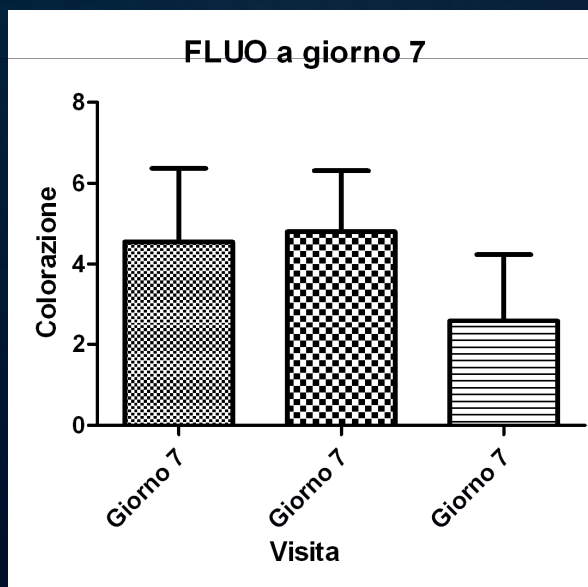
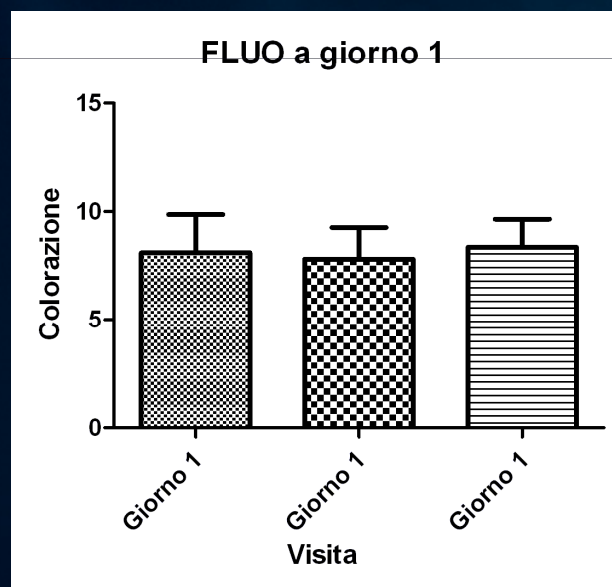
BUT pre e post Facoemulsificazione e post terapia con sostituto lacrimale ipotonico a base di HA 0.4%



Colorabilità Corneale con Fluoresceina post Facoemulsificazione e dopo terapia con sostituto lacrimale ipotonico a base di HA 0.4%



Colorabilità Congiuntivale con Verde di Lissamina post Facoemulsificazione e dopo terapia con sostituto lacrimale ipotonico a base di HA 0.4%





Tear film after cataract surgery

M.R.

Grazie