

“Später postoperativer traumatischer Lasik Flap Verlust”
(Late Postoperative Traumatic Lost of a Lasik Flap)
Liliana Werner, MD, PhD

Berlin Eye Research Institute (BERI)
 Berlin, Germany

John A. Moran Eye Center
 University of Utah
 Salt Lake City, UT, USA

LASIK Flap-Related Complications

Intraoperative	Early Postoperative <i>(Days after surgery)</i>	Late Postoperative <i>(Weeks to months after surgery)</i>
-Incomplete cut	-Infection	-Flap dislocation
-Perforated lenticule	-Diffuse lamellar keratitis	-Epithelial ingrowth
-Short flap	-Folds	-Stromal melt
-Free cap (absence of hinge)	-Dislodged flaps	-Irregular astigmatism
	- Traumatic flap loss	-Kerectasia
		-Dry eyes
		-Interface fluid syndrome (secondary to steroid-induced intraocular pressure elevation)

Late Traumatic LASIK Flap Lost

- 39-year-old man
- **Preoperative refraction:** -7.50 -0.25 x 42 (OD), and -7.25 -0.50 x 164 (OS), for BCVA of 20/20
- **Preoperative ultrasound pachymetry** (Orbscan, Bausch & Lomb): 580 (OD) and 575 (OS) microns
- **Hansatome microkeratome** (Bausch & Lomb): Flaps with a superior hinge
- **Keracor 217 excimer laser** (Bausch & Lomb): Ablation zone of 5.8 mm
- **Eleven months post- LASIK:** BCVA was 20/20 in both eyes, with -0.50 x 15 (OD), and plano (OS)

Late Traumatic LASIK Flap Lost

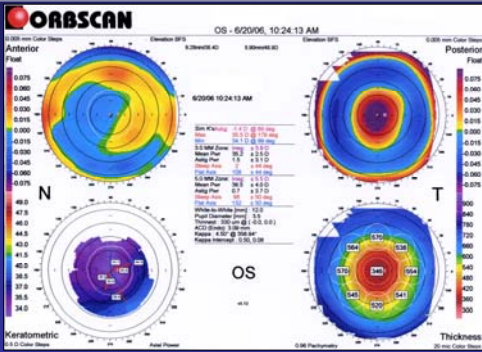
- **3 years and 5 months post-LASIK:** OS struck by the finger of a friend while practicing karate
- Decrease in visual acuity, ocular pain, conjunctival hyperemia, LASIK flap could not be found
- **Central 8.5 mm of cornea:** fluorescein positive
- **Pachymetry:** 493 microns (optical coherence pachymeter; 4 Optics)
- **Treatment:** Ofloxacin eye drops and artificial tears solution, three times/day, dexamethasone eye drops, 5 times/day, vitamin C, 1 gram orally/day. A bandage contact lens was placed in OS

Late Traumatic LASIK Flap Lost

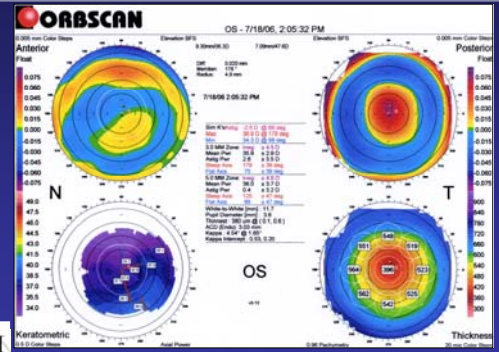
1 day after injury 1 week after injury

- Re-epithelialization 1 week post-injury
- Dexamethasone reduced and tapered over 2 weeks
- BCVA 20/200 with -1.25 -1.25 x 111 (1 week post-injury)
- Central OCP 374 microns (1 week post-injury)

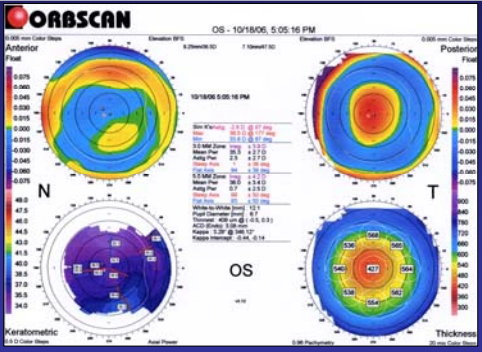
Late Traumatic LASIK Flap Lost: 1 Week Post-Injury



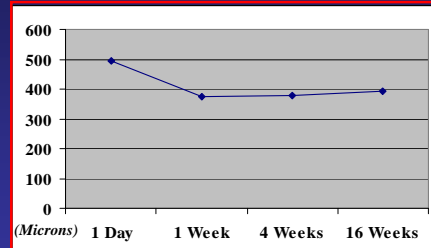
Late Traumatic LASIK Flap Lost: 4 Weeks Post-Injury



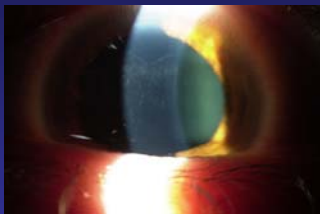
Late Traumatic LASIK Flap Lost: 16 Weeks Post-Injury



Optical Coherence Pachymetry (OCP)

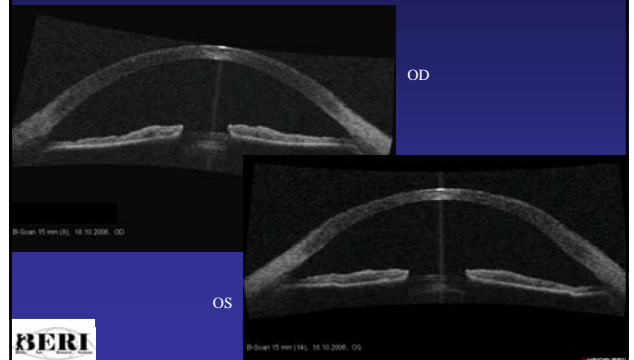


Late Traumatic LASIK Flap Lost

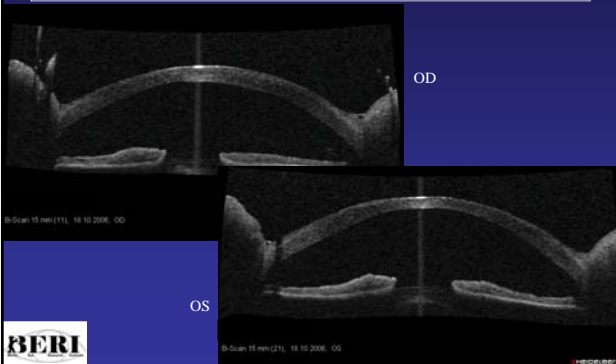


- Last seen (16 weeks post-injury), BCVA 20/40 with -1.75 -0.5 x 30
- Mild central corneal haze under slit-lamp examination
- Significant complaints of dysphotopsia
- OCP: 394 microns

Late Traumatic LASIK Flap Lost: OCT 16 Weeks Post-Injury (Horizontal meridian)



**Late Traumatic LASIK Flap Lost:
OCT 16 Weeks Post-Injury (Vertical meridian)**



Late Traumatic LASIK Flap Lost

- Rare and serious complication: Severe irregular astigmatism and unpredictable refractive change can occur
- This case further highlights the vulnerability of flaps to trauma even late postoperatively
- If beginning of keratectasia, corneal cross linking might represent a future option



Liliana Werner, MD, PhD

Director of Pre-Clinical Research
Berlin Eye Research Institute
Berlin, Germany



**MORAN
EYE CENTER**

Associate Professor
John A. Moran Eye Center
University of Utah
Salt Lake City, UT, USA