



**WOULD YOU  
SMILE AFTER  
LASIK  
NIGHTMARE?**

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Fellowship trainer and examiner

# Case



**Dr. A**

## Dr. A

23 years old medical student

Asking for refractive surgery



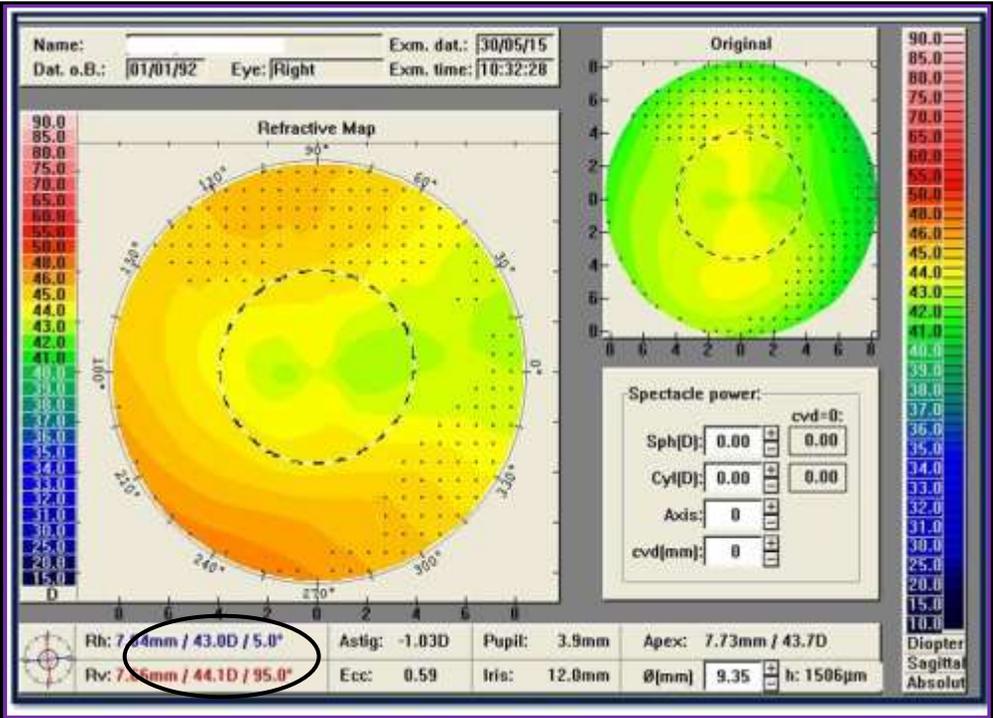
	OD	OS
UCVA	0.05	0.05
MR	-3.50 -0.50 @ 40.	-3.50 -0.25 @ 160
BCVA	1.0	1.0

## Dr. A

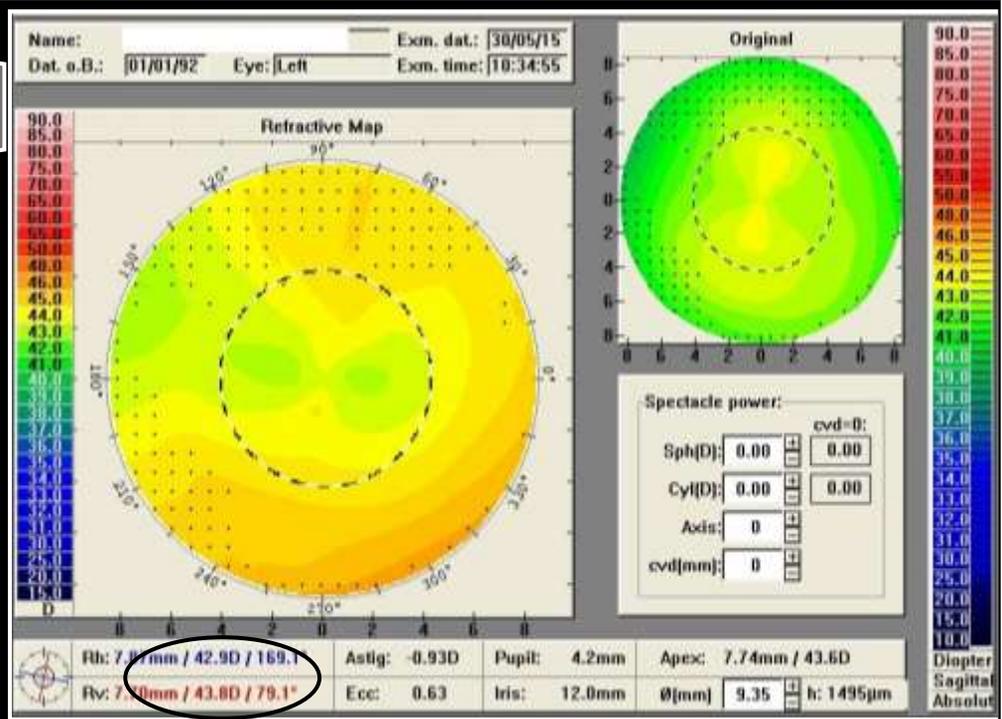
- Refraction is the same as glasses.
- No ocular or systemic disease.
- No history of contact lens wear.
- Anterior segment >> Normal.
- Fundus >> Normal disc and vessels.
- IOP >> 16 mmHg. \*
- Central corneal thickness: 517 /512  $\mu$



## Dr. A



Dr. A



Dr. A



- A suction ring of size “0” with a “8” stop was placed on the eye.
- After adequate suction the microkeratome assembly was positioned and locked.
- A few drops of BSS were placed inside the ring and the microkeratome was activated.
- On removing the suction ring microkeratome assembly, the flap was found like that



**Dr. A**



**Dr. A**

**What is THIS!!!**

- There is thin, irregular, buttonholed flap with epithelium covering large part of the bed.
- There is also free cap .. The flap comes out with the spatula.



**What may be cause of this condition??!!**

Dr. A

### Intraoperative Complications of LASIK and SMILE

Jorge L. Alió, Ibrahim Toprak, and Hessah Arabiah

#### Thin, Irregular, or Buttonhole Flap

Previous versions of manual microkeratome were identified as the most frequent cause of intraoperative LASIK complications, with incidence of thin (0.3–0.75%), irregular (0.09%), or buttonhole (0.2–0.56%) flaps occurring at a relatively high rate (Fig. 1). However, introduction of advanced microkeratomes and FSL technology has significantly reduced the incidence of flap-



What may be cause of this condition??!

Dr. A

#### Review Article

### Complications of laser-assisted *in situ* keratomileusis

Pranita Sahay, Rahul Kumar Bafna<sup>1</sup>, Jagadesh C Reddy<sup>2</sup>, Rasik B Vajpayee<sup>3</sup>, Namrata Sharma<sup>1</sup>

*Predisposing Factors to Thin/Irregular/Buttonholed Corneal Flaps in LASIK*

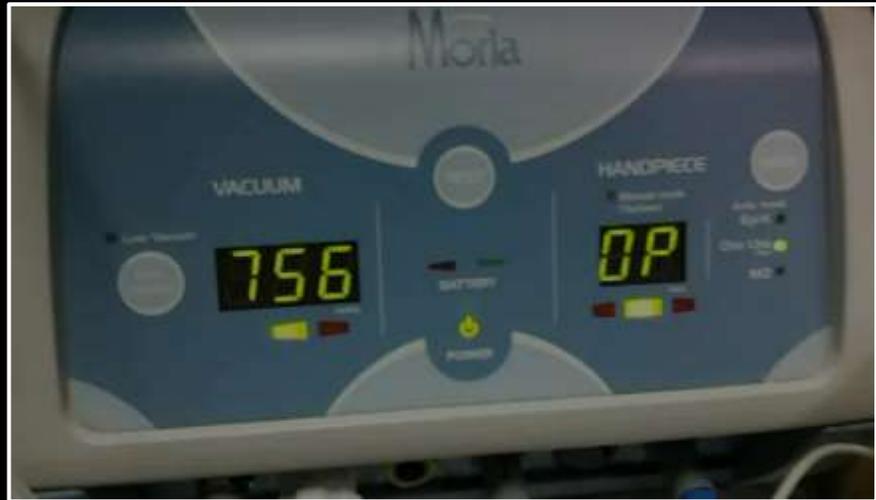
Factor	Possible mechanism
Steep corneas	g. resistance used to blade.
Flat corneas	ement of corneal tissue
Deep orbit, conjunctival displacement	defect, inappropriate handling
Lack of synchronization between and oscillatory blade movement	
Damaged blade	

**inadequate suction**



What may be cause of this condition??!

Dr. A



How to prevent this complication??!

Dr. A

### MICROKERATOME-RELATED COMPLICATIONS \*

Optometrists working within clinics and examining patients soon after treatment may see the following complications. It is unlikely that they will be required to manage the complication as a surgeon is usually in attendance.

#### *Failed flap*

There are several possible causes of a failed flap: **incomplete suction**, the patient squeezing their eyes together and displacing the microkeratome, malfunction of the microkeratome, or an epithelium that has a tendency to be loose. Fortunately, such incidences are rare with one study quoting all flap complications to be **2.19%**<sup>4</sup>

**Symptoms** When a flap failure occurs, treatment is aborted and the failed flap is left to heal. Apart from the vision, the eye will feel no different to the eye that has had successful treatment. In some cases, if abrasion has occurred, there may be some foreign body sensation.

\* LASIK a handbook for optometric



How to Manage this complication??!

**Dr. A**



Would you perform the other eye??!

**Dr. A**

While following the patient, waiting for healing.  
One month later the cornea is seen like that:

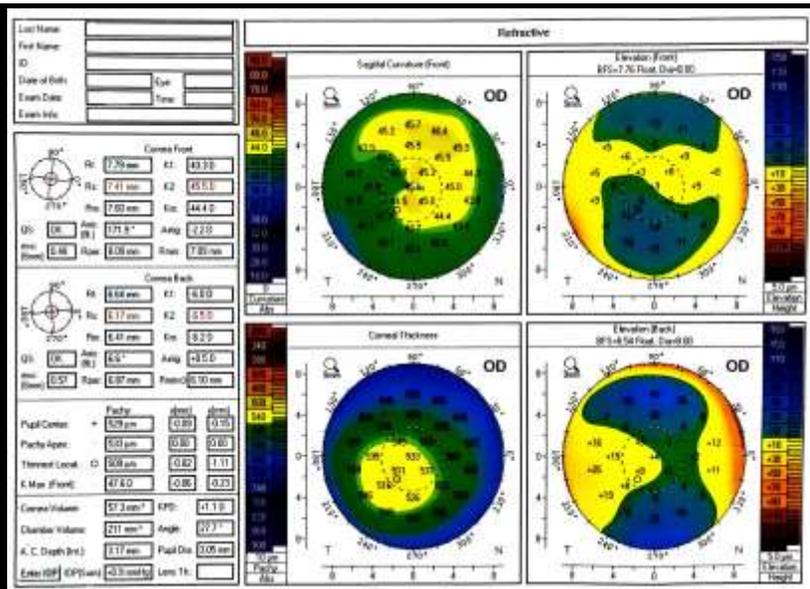


**Dr. A****How to manage this complication??!**

**Steroid treatment with lubricants and follow up  
was the decision**



**One month later the patient developed partial  
melting of the flap with scarring of the other parts**

**Dr. A****What to do NOW??!**

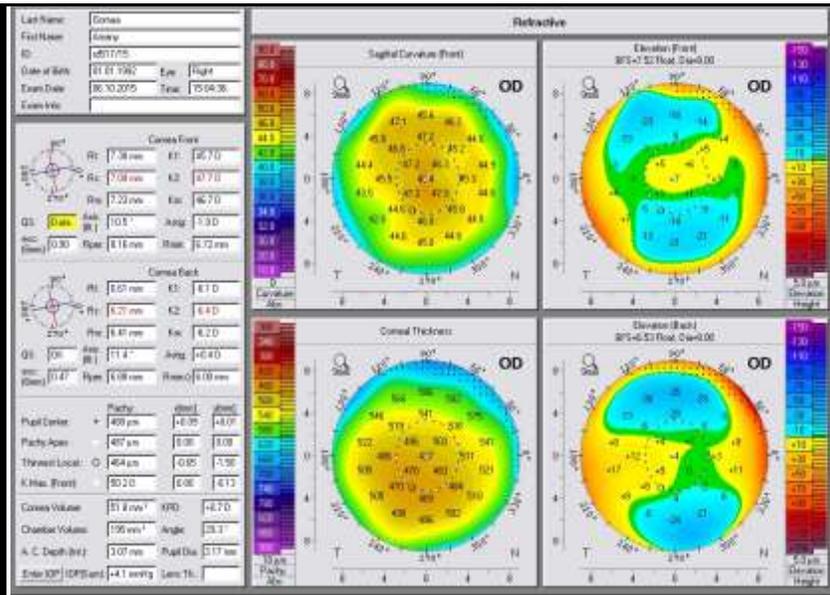
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I performed PTK “100 μ” for removal of the superficial corneal scar



What to do NOW??!

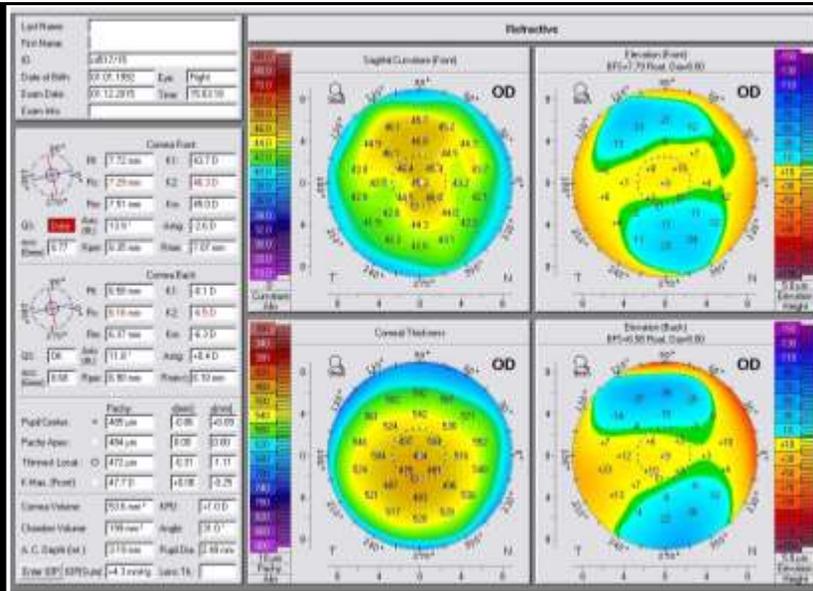
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One month later

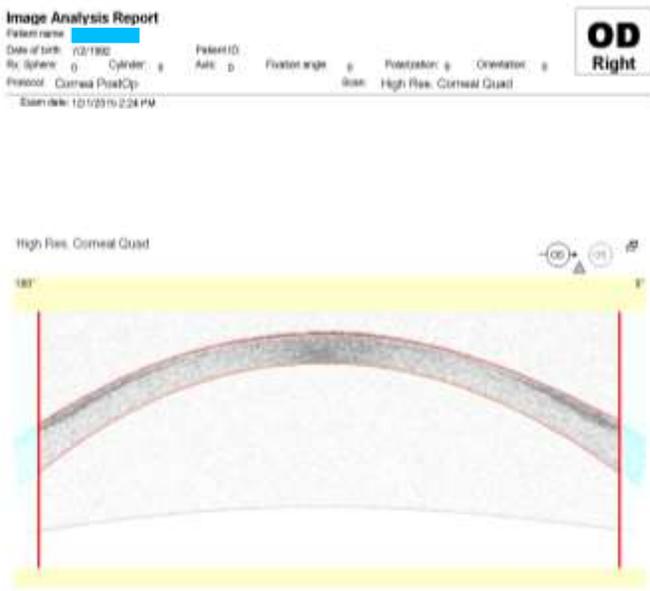


**Dr. A**

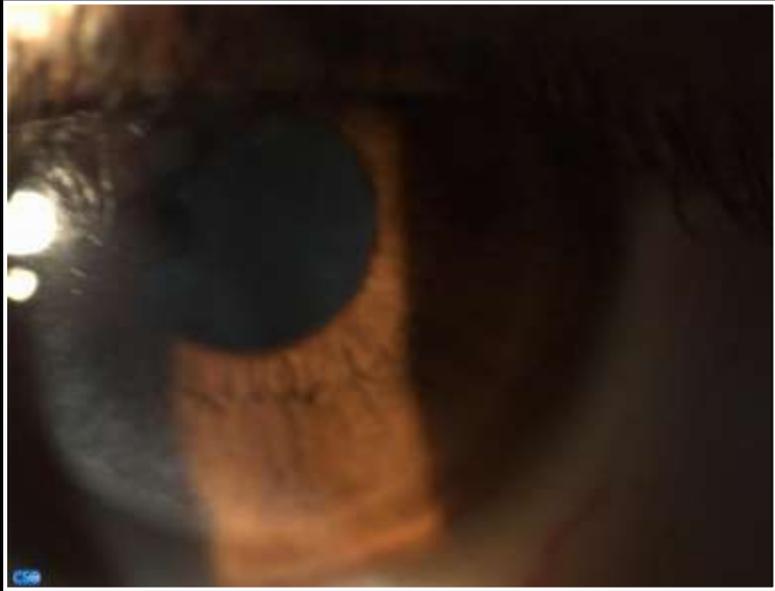


Three month later

**Dr. A**



Three month later >> Dense peripheral scar

**Dr. A**

After intense steroid treatment  
But patient complain of some eye pain and headache

**Dr. A**

IOP >> OD .. 35 mm Hg / OS .. 13 mm Hg  
No optic cupping

**Dr. A**

- Use of antiglaucoma medications
- Rapid downgrade of steroids.
- Use of NSAIDs.
- Continue with lubricants & ascorbic acid.
- Follow up of IOP, inflammatory signs & corneal scar.



IOP returned to normal values

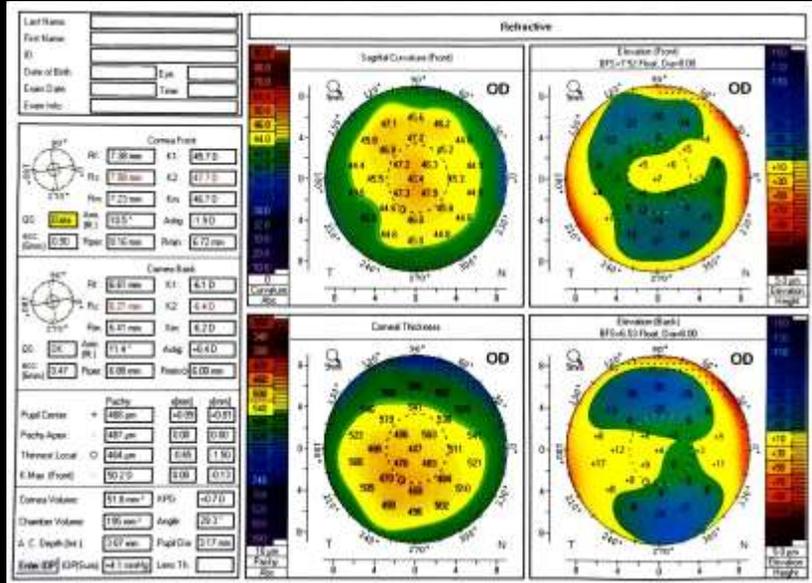
**Dr. A**

3 months later:

- IOP is normal.
- Cornea in more or less clear.
- Refraction is stable:  
sph -5.50 cyl -2.50 @ 180
- BCVA .. 0.9.



Dr. A



Sph -5.50 Cyl -2.0 @ 180.

Dr. A

## Management options

Contact Lens

PTK-PRK with under-correction.

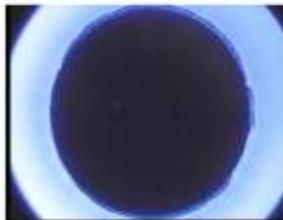
Femto-SMILE

Lenticular surgery "RLE or Phakic IOL"



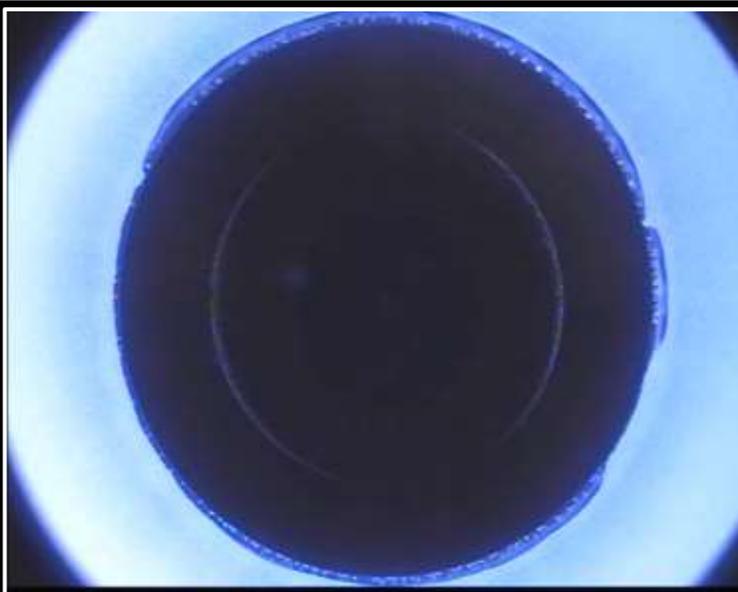
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Physician: Admin		Time: 17:51:00		©745 Jena, Germany +49 3641 220-0	
<b>Corneal surgery – SMILE</b>				OD OS	
<b>Diagnostic data</b>					
Cornea vertex distance [mm]:	12.00				
<b>Manifest</b>					
Sphere [D]:	-6.00				
Cylinder [D]:	-2.00				
Axis [°]:	7				
Corneal radius [mm]:	7.42				
Mean K-reading [D]:	45.49				
Pachymetry [µm]:	468				
<b>Treatment data</b>					
Treatment pack size:	S				
Suction time (hh:mm:ss):	00:00:40				
<b>Cap data</b>			<b>Nomogram info</b>		
Diameter [mm]:	7.50		Refraction, Version 2.2		
Thickness [µm]:	100		Lenticule data		
Side cut angle [°]:	70		Optical zone [mm]: 5.80		
Incision position [°]:	120		Transition zone [mm]: 0.10		
Incision angle [°]:	38		Minimum thickness [µm]: 1		
Incision width [mm]:	2.50		Side cut angle [°]: 130		
			Refractive correction		
			Sphere [D]: -6.00		
			Cylinder [D]: -2.00		
			Axis [°]: 7		



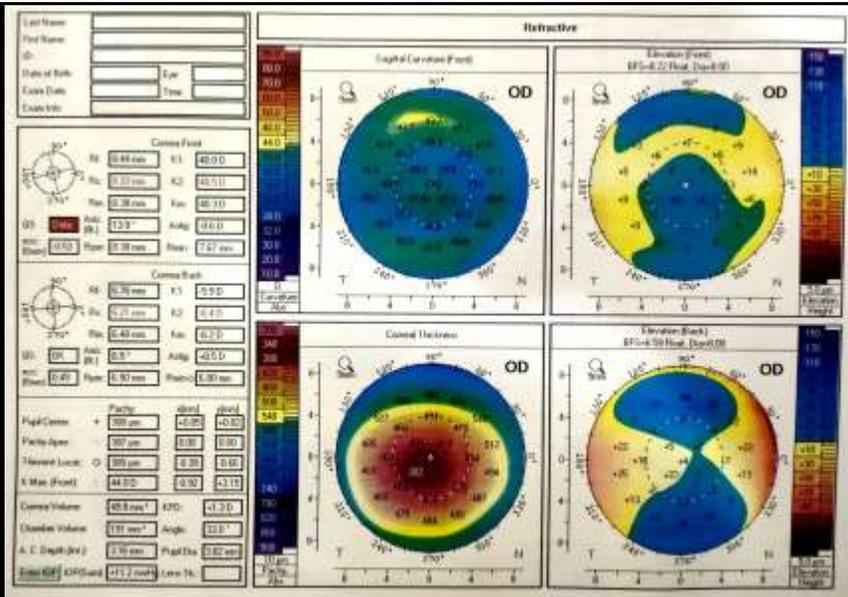
The Decision was ..

Dr. A



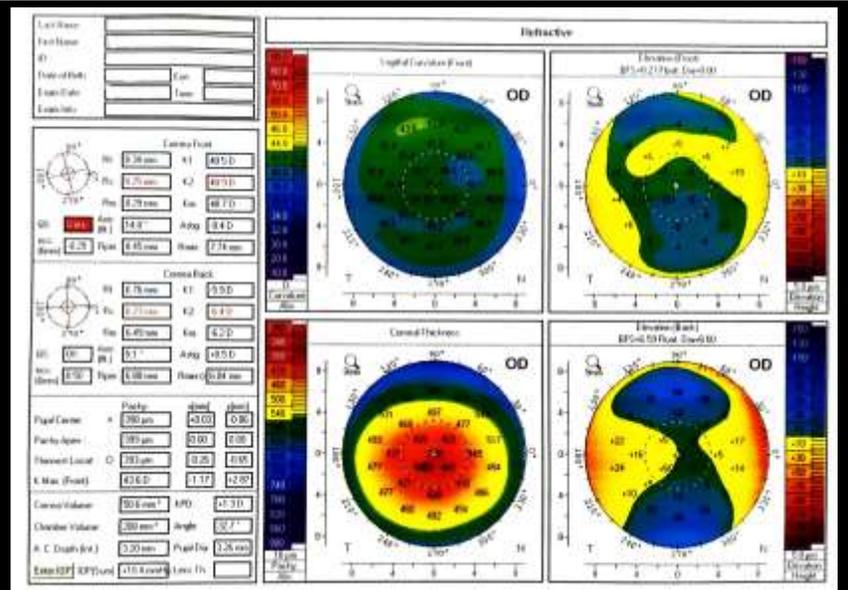
The Decision was ..

Dr. A



One month later

Dr. A



Three month later

Dr. A

NAME			
DATE			
NO. 9577			
REF. DATA			
UD:	12.00	CYL:	-0.75
<R>	S	C	A
	+ 0.00	- 0.50	78
	+ 0.00	- 0.50	75
	+ 0.00	- 0.50	69
	+ 0.00	- 0.50	75
	S. E.	- 0.25	
<L>	S	C	A
	+ 0.25	- 0.50	102
	+ 0.25	- 0.50	101
	+ 0.25	- 0.50	102
	+ 0.25	- 0.50	102
	S. E.	+ 0.00	
PD:	58		TOPCO

VA: 1.0



Dr. A

Contents lists available at [ScienceDirect](#)

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journal homepage: [www.ajocase-reports.com/](http://www.ajocase-reports.com/)

**Femto-SMILE after photo-therapeutic keratectomy in an eye with failed LASIK flap: A case report**

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**ARTICLE INFO**

**Keywords:**  
 Flap complications  
 Topo-PTS  
 Femto-SMILE  
 Primary LASIK

**ABSTRACT**

**Purpose:** The aim of the study is to describe a case where to address the refractive defect following topography-guided ablation a mixed ocular surface after an initial LASIK flap.  
**Observation:** A 23-year-old female experienced a thin a surgery of the right eye. Subsequently, the progression course showed meeting and partial flap meeting. Topo-PTS






**Dr. A**



**Mr. M**



**Mrs. S**

*Thank You*

*Ramy Awad*