

TEACHING COURSE

# Cases

DEPARTMENTS OF OPHTHALMOLOGY: UNIVERSITY OF  
MANNHEIM - HEIDELBERG AND NEW YORK - WEILL  
CORNELL MEDICAL COLLEGE OF CORNELL

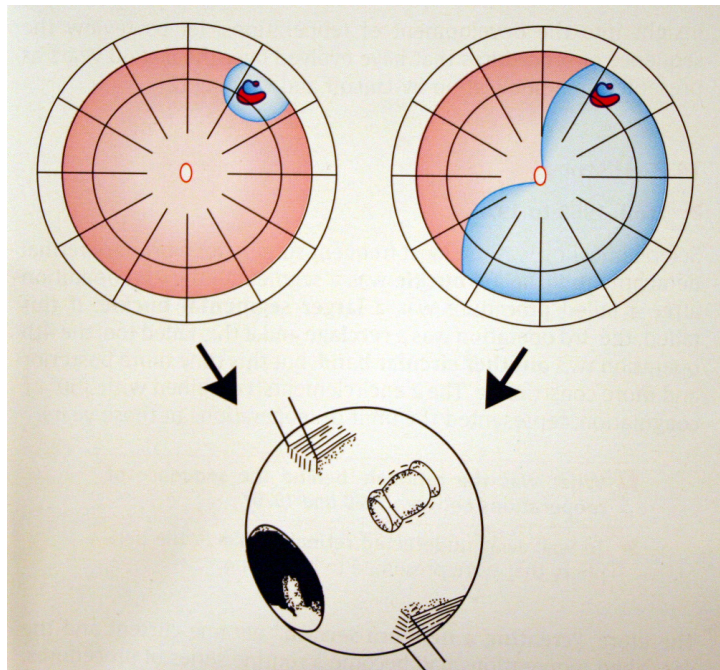
## PROGRAM

### 136. TEACHING COURSE

by International Faculty:

### RETINAL DETACHMENT:

**Extraocular Minimal Surgery, Diagnostics,  
Options for Repair, Surgical Video-Session,  
Case Presentations with Quiz**



**AMSTERDAM, Netherlands**

**October 5, 2023**

**AMSTERDAM, NETHERLANDS, OCTOBER 5, 2023**

# TEACHING COURSE

5 October 2023  
Amsterdam,  
NETHERLANDS

Prof. Ingrid Kreissig, MD, Prof. h.c. for Research  
Departments of Ophthalmology in Mannheim - University  
Heidelberg, Germany and New York Presbyterian Hospital -  
Cornell University, New York, USA  
email: [Ingrid.kreissig@medma.uni-heidelberg.de](mailto:Ingrid.kreissig@medma.uni-heidelberg.de)

Dear Teaching Course Participants,

October, 2023

## Welcome to the I36. Teaching Course!

Enclosed you will find a collection of retinal detachments,  
collected from us for the participants attending this Teaching  
Course about:

### Surgery for Retinal Detachments in particular Extraocular Minimal Surgery (Minimal Segmental Buckling without Drainage)

Wishing you a stimulating and exciting course,

Prof. Dr. Ingrid Kreissig  
(Germany, USA)

Prof. Dr. Stefan Mennel  
(Austria, Germany)

**136. TEACHING COURSE**  
with International Faculty  
**SURGERY FOR RETINAL DETACHMENT, IN  
PARTICULAR: MINIMAL SEGMENTAL  
BUCKLING WITHOUT DRAINAGE**

**Scientific Program:**

Univ.-Prof. Ingrid Kreissig, MD; Prof. h.c. for Research  
Dept. of Ophthalmology Univ. Mannheim - Heidelberg  
Theodor-Kutzer Ufer 1-3,  
68167 Mannheim, Germany  
Website: <http://kreissig.uni-hd.de/>  
e-mail: [Ingrid.kreissig@medma.uni-heidelberg.de](mailto:Ingrid.kreissig@medma.uni-heidelberg.de)

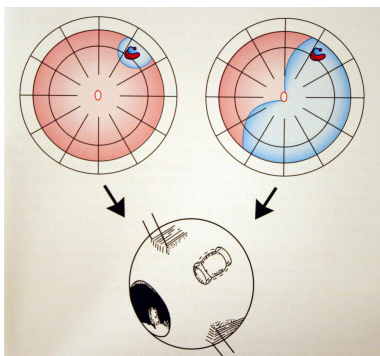
**Organizing Secretary:**

European Society of Retina Specialists (EURETINA),  
Temple House, Temple Road, Blackrock Co.  
Dublin, Ireland; Tel: +353 1 2091100; Fax: +353 1 2091112

**LOCATION OF COURSE**

RAI Congress Centre  
Amsterdam

**CONTENT**



**Minimal Extraocular Surgery**

Program .....	4-5
Minimal Surgery for Retinal Detachment - Book 1 and 2 .....	6
Lincoff Rules to find the primary break .....	7
Lincoff - Kreissig Rules to find the break in reoperation.....	7
Conversation of Harvey Lincoff, MD and Ingrid Kreissig, MD .....	8
Primary retinal detachment: Options for repair.....	8
Detachment Surgery.....	9-10
Interview of Ingrid Kreissig, MD: Minimal Surgery of Retinal Detachment .....	11
Case presentations.....	12-24

**13:15 WELCOME**

*I Kreissig (Germany)*

**1. DIAGNOSTICS: RHEGMATOGENOUS  
PRIMARY RETINAL DETACHMENT**

*Moderators: I Kreissig (Germany)  
D Tognetto (Italy)*

1.1. Lattice degeneration and breaks in fellow eye: What to do or not to do?  
*S Mennel (Austria)*

1.2. Misdiagnosis of retinoschisis  
*V Ferrara (Italy)*

1.3. Ambulatory double patching  
*D Tognetto (Italy)*

1.4. The 4 Lincoff Rules to find the primary  
break  
*I Kreissig (Germany)*

**2. MINIMAL SCLERAL BUCKLING  
WITH SPONGE/S, WITHOUT DRAINAGE  
AS TAMPONADE FOR BREAK/S**

*Moderators: S Mennel (Austria)  
F LaFranco (USA)*

2.1. Rational, indications, optimal tamponade of  
break(s), video of surgery: Complications, long-  
term anatomical and functional results  
*F LaFranco (USA)*

2.2. Differential diagnosis of postop. residual  
fluid after nondrainage  
*D Shroff (India)*

**3. MAXIMAL SCLERAL BUCKLING  
WITH CIRCULAR BUCKLE, WITH  
DRAINAGE AS TAMPONADE FOR BREAK/S**

3.1. A look at cerclage after 50 years:  
Indications, complications, long-term results  
*S Mennel (Austria)*

**15:00- GROUP PHOTO, BREAK**

**15:25**

**15:25- 4. I.O. GAS INJECTION AS  
17:15 TAMPONADE FOR BREAK/S**

*Moderators: V Ferrara (Italy), A Kothari (India)*

4.1. Expanding-gas operation, now called pneumatic retinopexy:  
As office procedure for uncomplicated detachments: Indications,  
complications, long-term results  
*A Kothari (India)*



## **5. I.O. SURGERY FOR TAMPONADING BREAK/S**

5.1. Primary Vitrectomy: Rationale, indications, complications, long-term results  
*T Boeker (Germany)*

## **6. MINIMAL SCLERAL BUCKLING WITHOUT DRAINAGE FOR COMPLICATED DETACHMENTS**

6.1. Reoperation:  
The 4 Lincoff - Kreissig Rules to find the undetected break  
*I Kreissig (Germany)*

6.2. How to minimize risk of PVR  
*A Kothari (India)*

6.3. PVR-C1/C2 detachments: Try minimal segm. buckling without drainage first: Long-term anatomical and functional results  
*J Schmidt (Germany)*

## **7. COMPARISON OF PRESENT TECHNIQUES FOR REPAIR OF PRIMARY RETINAL DETACHMENT**

7.1. Temporary balloon buckle without drainage vs. pneumatic retinopexy vs. min. segmental buckling without drainage vs. primary vitrectomy  
*T Boeker (Germany)*

## **8. VIDEO-SESSION: Various surgeons presenting minimal segmental buckling without drainage**

*Moderators: A Kothari (India), F LaFranco (USA),  
S Mennel (Austria), D Tognetto (Italy)*

*Presenters:  
T Boeker (Germany), V Ferrara, (Italy), A Kothari (India), F LaFranco (USA), S Mennel (Austria), J Schmidt (Germany), D Tognetto (Italy)*

## **9. QUIZ OF VARIOUS RETINAL DETACHMENTS AND THEIR TREATMENT OPTIONS**

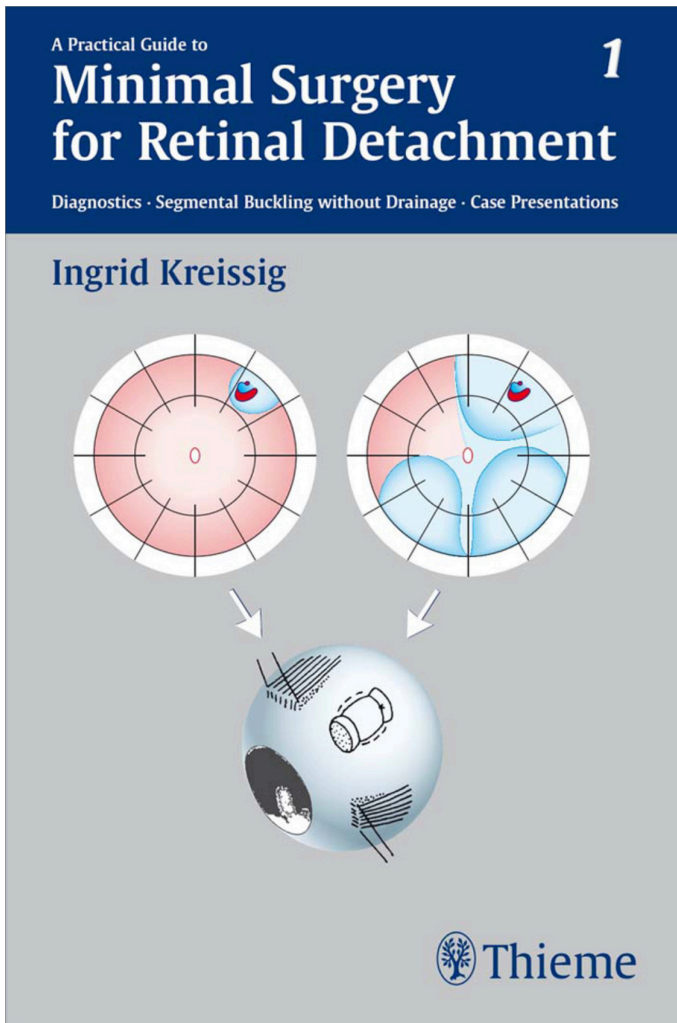
*Moderators. T Boeker (Germany)  
I Kreissig (Germany); S Mennel (Austria)*

*Presenters:  
T Boeker (Germany), S Mennel (Austria),*

*Panel:  
V Ferrara (Italy), A Kothari (India), S Mennel (Austria), J Schmidt (Germany),  
D Shroff (India), A Sudhalkar (India), D Tognetto (Italy), W Wong (Malaysia)*

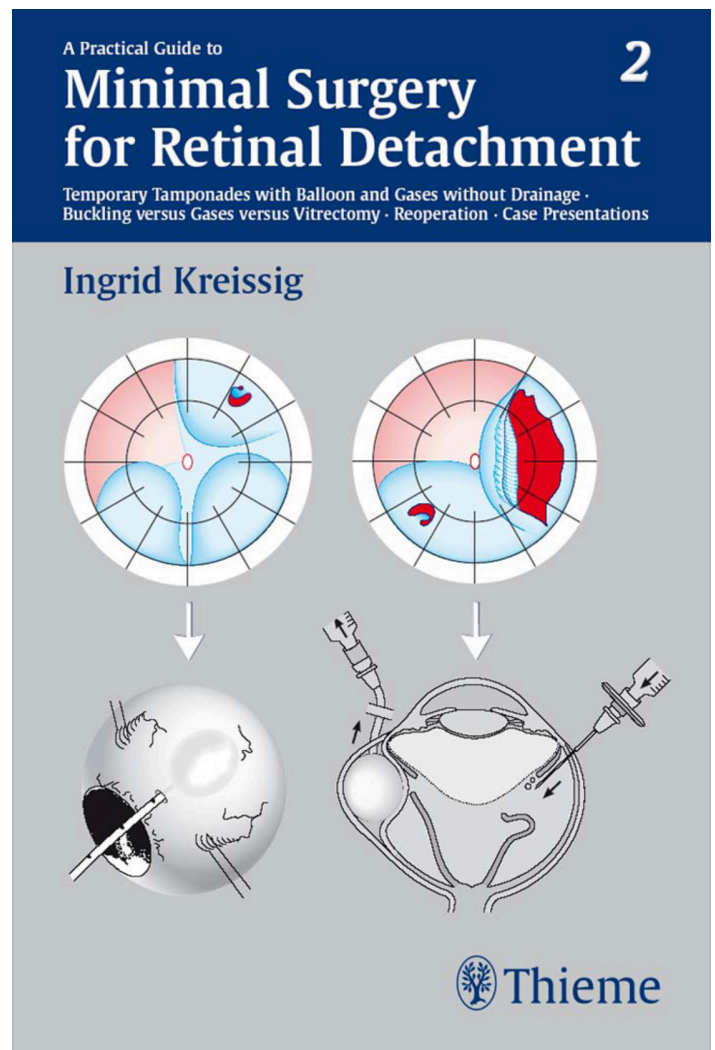
## **10. DISTRIBUTION OF DIPLOMA**

# MINIMAL SURGERY FOR RETINAL DETACHMENT



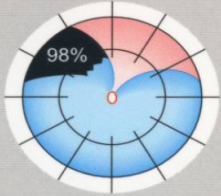
Minimal Surgery for Retinal Detachment. Book 1  
Thieme Publisher Stuttgart-New York  
2000, 1-287.  
ISBN 3-13-111061-9 (GTV)  
ISBN 0-86577-781-0 (TNY)  
As ebook on <http://ebookstore.thieme.com/>

Minimal Surgery for Retinal Detachment. Book 2  
Thieme Publisher Stuttgart-New York  
2000, 1-356.  
ISBN 3-13-126151-X (GTV)  
ISBN 0-86577-994-5 (TNY)  
As ebook on <http://ebookstore.thieme.com/>

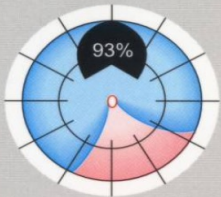


**Rules to Find the Primary Break**

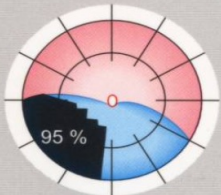
**Lincoff Rules**



**Rule 1**  
**Superior temporal or nasal detachments:**  
 In 98% the primary break lies within 1 ½ clock hours of the highest border



**Rule 2**  
**Total or superior detachments that cross the 12 o'clock meridian:**  
 In 93% the primary break is at 12 o'clock or in the triangle, the apex of which is at the ora serrata, and the sides of which extend 1 ½ clock hours to either side of 12 o'clock



**Rule 3**  
**Inferior detachments:**  
 In 95% the higher side of the detachment indicates on which side of the disc an inferior break lies



**Rule 4**  
**«Inferior» bullous detachment:**  
 Inferior bullae in rhegmatogenous detachment originate from superior break

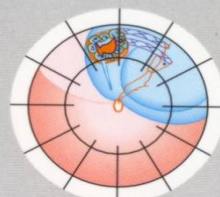
ISBN 3-13-111061-9 (GTV)  
 ISBN 0-86577-781 (TNY)

**Rules to Find the Break in Reoperation**

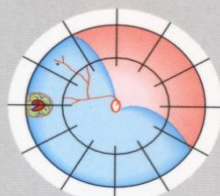
**Lincoff-Kreissig Rules**



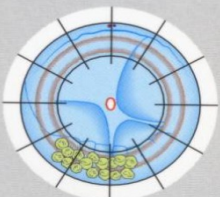
**Rule 1**  
 When the **superior border** of a temporal or nasal superior detachment **drops below the buckle**, it implies an undetected break within 1 ½ clock hours below the new superior border



**Rule 2**  
 When the pattern of a detachment (superior, lateral or inferior) converts from **one pattern to another**, it indicates an undetected break consistent with the new pattern



**Rule 3**  
 When the **borders** of detachment remain **unchanged** after a buckling operation and the buckle is in correct position, it implies an undetected break above the buckle



**Rule 4**  
 When a **total detachment** remains **unchanged** after being encircled and drained, it implies an undetected break anterior to the existing cerclage near 12 o'clock

ISBN 3-13-111061-9 (GTV)  
 ISBN 0-86577-781 (TNY)

## CONVERSATION HARVEY LINCOFF AND INGRID KREISSIG



The Foundation of the American Academy of Ophthalmology  
Museum of Vision & Ophthalmic Heritage

**Conversation Between Harvey Lincoff, MD and Ingrid Kreissig, MD**  
Orlando FL, October 22, 2011

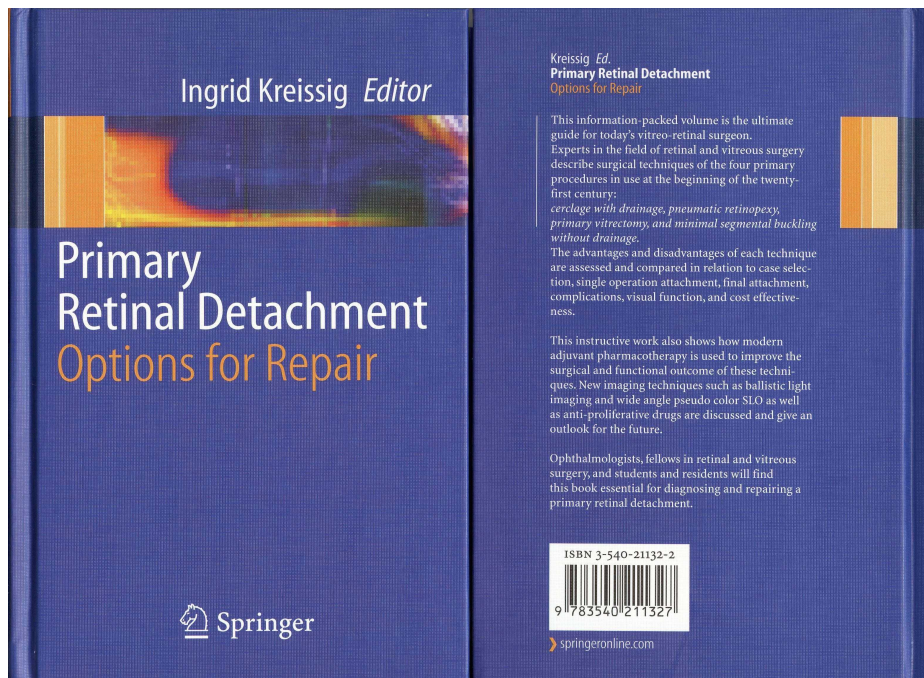
*“Here is the link for the oral history of Prof. Kreissig and Prof. Lincoff, published online at:  
The fastest and one click to get this interview is to use this link:*

<https://tinyurl.com/LincoffKreissig>

or you simply go to the Oral History section of the website and find the names Lincoff and Kreissig listed there: <http://www.museumofvision.org/bios/>

By this you can listen/read the oral interview, given by Prof. Kreissig and Prof. Lincoff at the Meeting of the American Academy of Ophthalmology in Orlando in 2011. In this interview you can listen to the 2 mentioned retinal detachment surgeons and read the entire interview as being added as a typed manuscript.”

## Primary Retinal Detachment - Options for Repair



Now available as an ebook from Springer  
Springer Publisher Berlin-Heidelberg 2005, 1-215  
ISBN 3-540-21132-2  
9 783540-211327



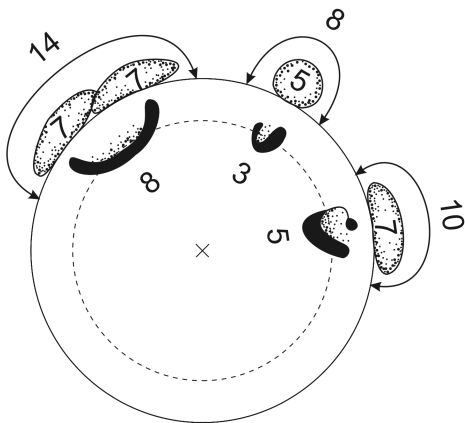


Fig. 8.3 Diameters of sponge cylinders used to tamponade breaks of various sizes, with the widths of the compressing mattress suture (drawing according to H. Lincoff, M.D.).

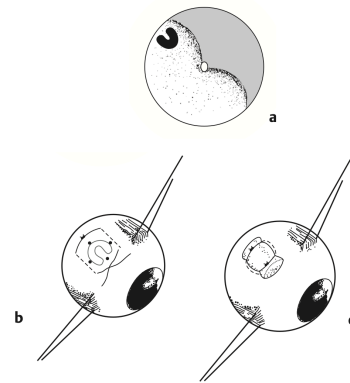


Fig. 8.4 Minimal extraocular detachment surgery.  
 a Superior lateral detachment, with a horseshoe tear at 10:30.  
 b The tear, localized by marks on the sclera, is treated with cryopexy and surrounded with mattress suture centered at the plotted radian of the tear.  
 c The sponge cylinder is compressed by mattress suture tied over the tear. On the need for a posterior knot in addition to the anterior one, see the text p. 135.

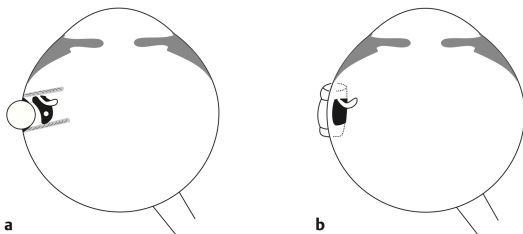


Fig. 8.6 Tamponade of a horseshoe tear.  
 a Using a circumferential buckle, the horseshoe tear is not tamponaded adequately: The operculum, the area of future traction, is not on the ridge of the buckle, but on the descending slope. In addition there is a risk of posterior radial folds, with subsequent leakage.  
 b A short radial buckle provides optimal tamponade for a horseshoe tear: The entire tear is placed on the ridge of the buckle, i.e., this counteracts fishmouthing of the tear (avoiding risk of posterior leakage) and provides optimum support for the operculum (counteracting future vitreous traction).



Fig. 8.31 Late complications after cerclage. Left: Normal globe. Right: Deformed globe after cerclage (25% constriction). The living eye responded to the residual pressure of the elastic element by elongation (myopization) and reduction of its diameter. In this situation, there is a risk of decreased blood circulation (retinal and choroidal), subsequent decrease of regained visual function, and even scleral erosion.

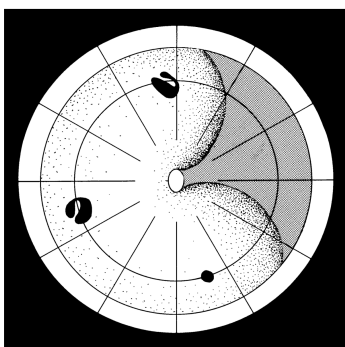
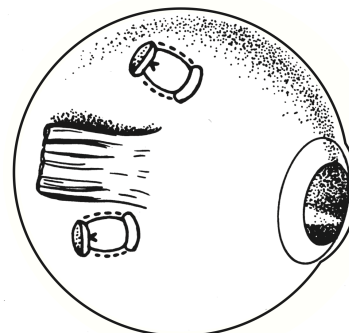


Fig. 8.32 A 3-quadrant detachment with multiple breaks. 3 different approaches to buckling are shown here, involving increasing levels of morbidity: minimal buckling, more extensive buckling, and circular buckling (cerclage).  
 a The detachment, with 1 break in each of 3 quadrants. The breaks are over 2 clock hours apart; no additional breaks were found in the remaining detached retina.



b Minimal buckling, at the same time implying optimal tamponade for the tears, consisted of applying 3 individual radial sponges to the breaks, without drainage. The retina reattached. No late complications or reduction in the regained visual function are to be expected in comparison to the fellow eye.

Figs: 8.3, 8.4, 8.6, 8.31, 8.32 are with permission from: Ingrid Kreissig: A Practical Guide to Minimal Surgery for Retinal Detachment: Book 1, Publisher Thieme, Stuttgart, New York, 2000

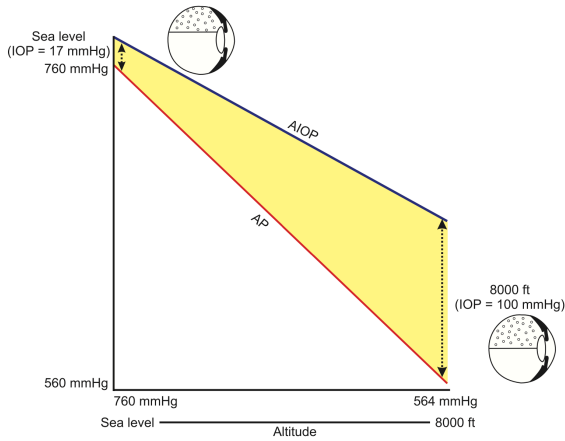


Fig. 10.11 Effect of an ascent being on an airplane from sea level to 8,000 feet on an eye containing a gas bubble too large to be compensated for. The absolute intraocular pressure (AIOP) has fallen, but not as rapidly as the fall in atmospheric pressure (AP). As a result, the intraocular pressure (IOP) has increased (see yellow area) [33].

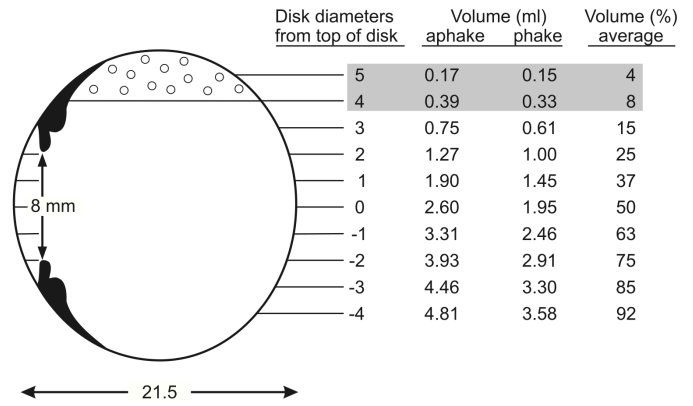


Fig. 10.12 Chart showing the volume of an intraocular gas bubble in ml and the percentage of total volume measured ophthalmoscopically in disk diameters (dd) of the meniscus above the top of the disk. When the meniscus of the bubble is 4 dd above the top of the disk, the fill is less than 10% (shaded in gray). 10% is the maximal volume with which a patient can travel safely on an airplane.

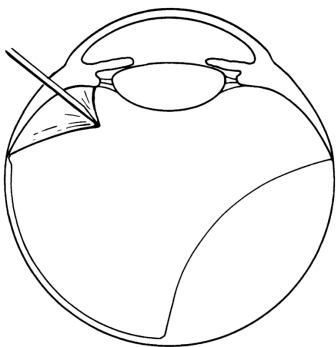


Fig. 10.24 Intraocular injection of gas via the pars plana: To prevent the complication of “gas under the retina,” the tip of the needle has to be through the ciliary epithelium and through a proliferative membrane that might be adherent to the internal surface of the ciliary epithelium. If necessary, drill with the tip of the needle through the membrane, inject a small gas bubble and observe whether the bubble ascends towards the back of the lens. Only then can you start with the intraocular gas injection.

Figs. 10.11, 10.12, 10.24 are with permission from: Ingrid Kreissig: A Practical Guide to Minimal Surgery for Retinal Detachment: Book 2, Publisher Thieme, Stuttgart, New York, 2000

## INGRID KREISSIG - INTERVIEW

## “Minimal Extraocular Surgery for Repair of a Retinal Detachment is Limited to the Area of the Retinal Break/s.

The premises for reattachment are:


- to find all the breaks,
- precise localization of the detached break,
- to buckle the break sufficiently - though intraoperatively still being detached,
- mandatory is experience in binocular indirect ophthalmoscopy with the knowledge,
- how to overcome the radial parallax in relation to the detached break, i.e., by starting with the localizing indentation of the detached break from the ora serrata towards the break,
- how to overcome the circumferential parallax, i.e., by positioning the binocular indirect ophthalmoscope 180 degree opposite to the position of the detached break.

However, this minimal extraocular surgery for repair of a retinal detachment, at first had to overcome 5 hurdles for its subsequent acceptance.“

Prof. Ingrid Kreissig, MD is talking in an interview about the development of this minimal extraocular intervention and how over decades the various hurdles for its acceptance had been overcome.

[https://www.umm.uni-heidelberg.de/ag/kreissig/minimal\\_extraocular\\_surgery.html](https://www.umm.uni-heidelberg.de/ag/kreissig/minimal_extraocular_surgery.html)

### Minimal Extraocular Surgery for Retinal Detachment: A Story of a Creative Partnership



Ingrid Kreissig, MD, Univ.-Prof., Prof. h.c.

Department of Ophthalmology Mannheim, University of Heidelberg, Germany  
Adjunct Professor, New York-Presbyterian Hospital-Cornell University, USA

00:03 11:26



**Case: 1**

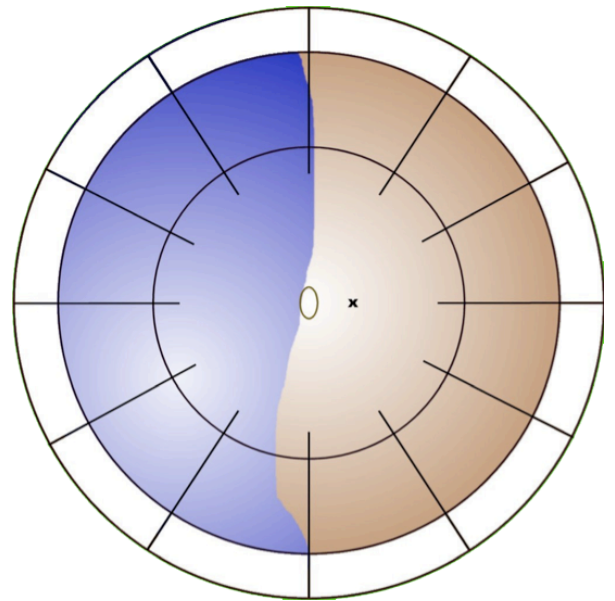
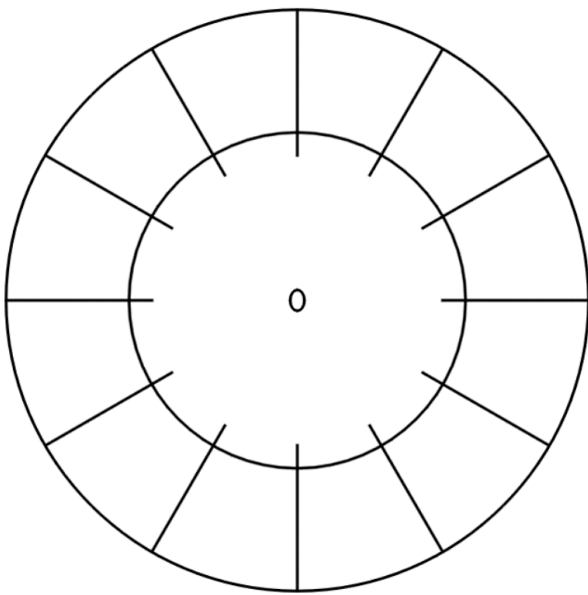
**Patient: V.A., male, 22 yrs**

Complaints: shadow for 2 weeks

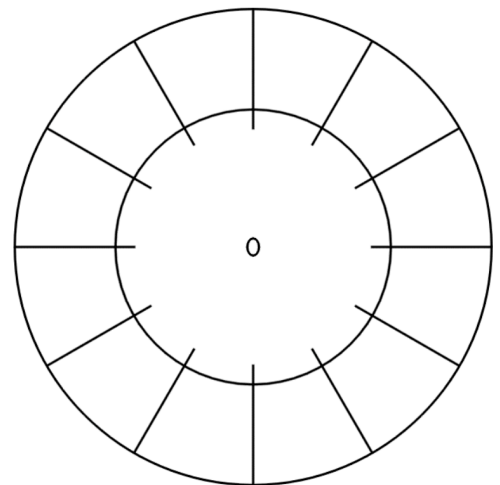
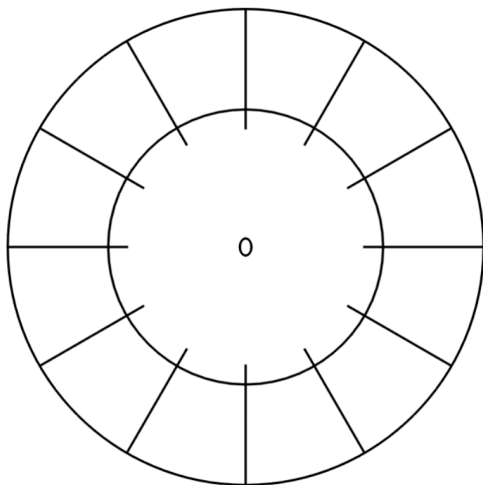
History:

Preoperative Findings: VA 0,4 OS

preoperative



postoperative



**Case: 2**

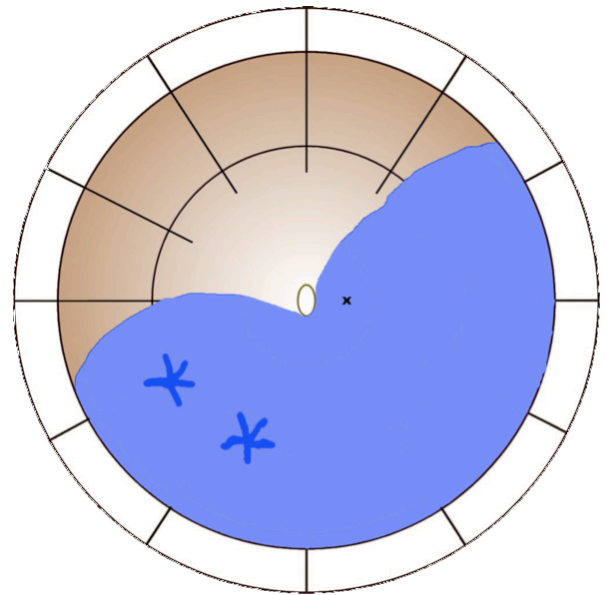
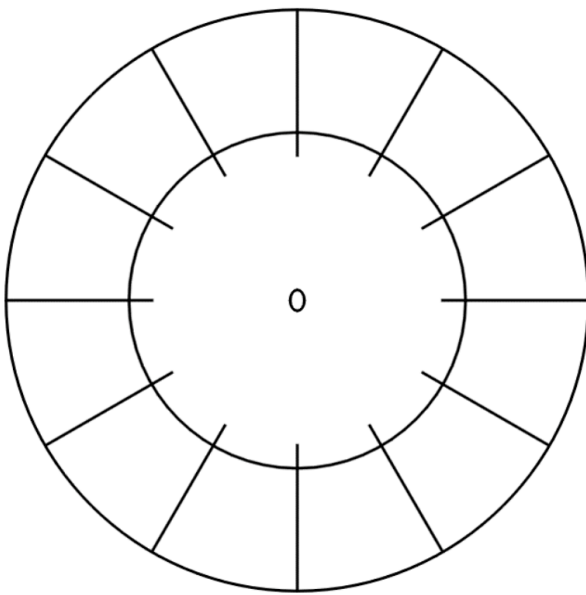
**Patient: male, 45 yrs**

Complaints: „about“ 2 months

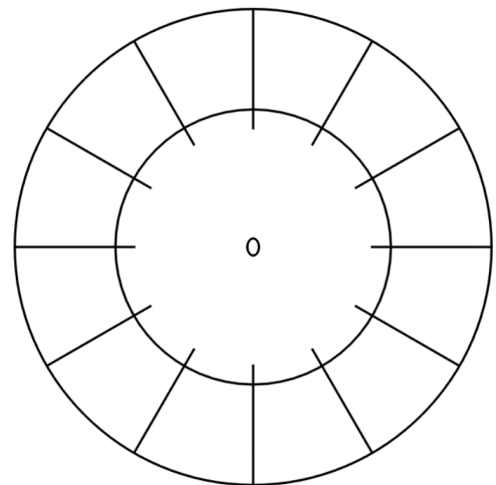
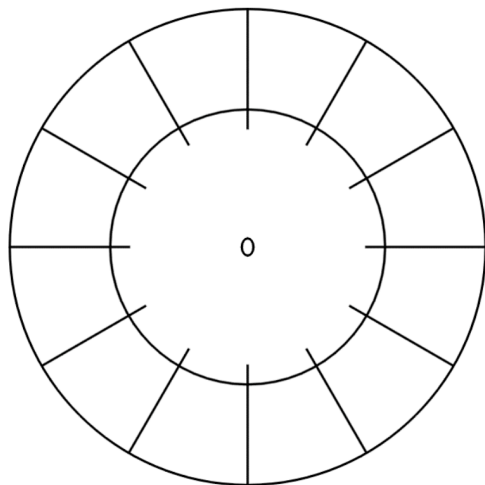
History: myopia -5 dpt OU; IDDM for 10 a

Preoperative Findings: VA OD 0,8 OS 1/35

preoperative



postoperative



**Case: 3**

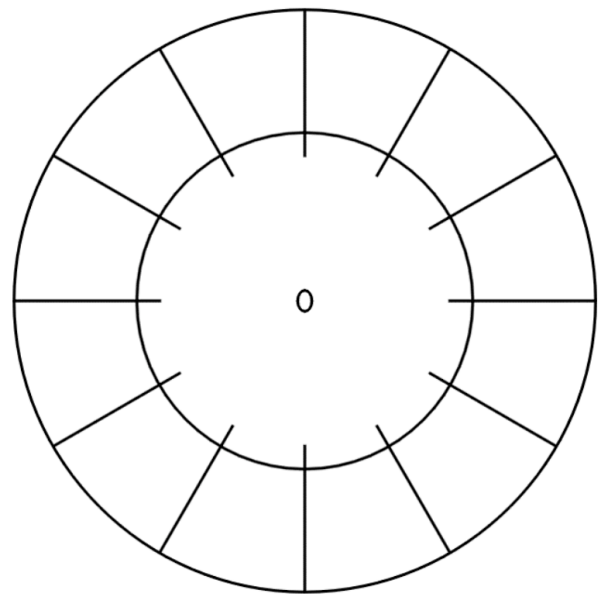
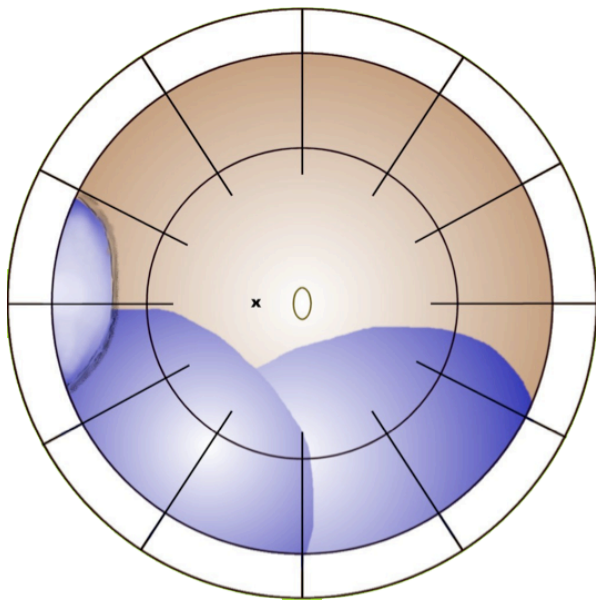
**Patient: female, 74 yrs**

Complaints: 3 months cloudy vision

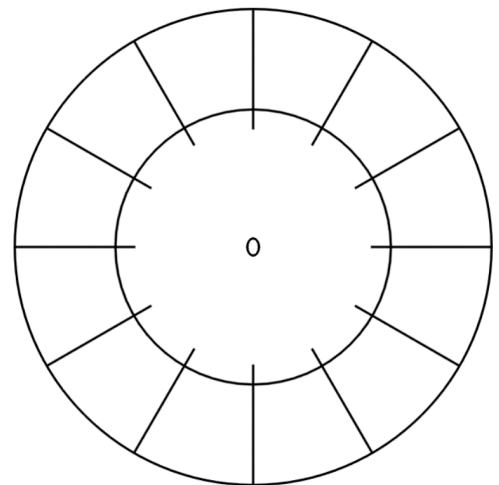
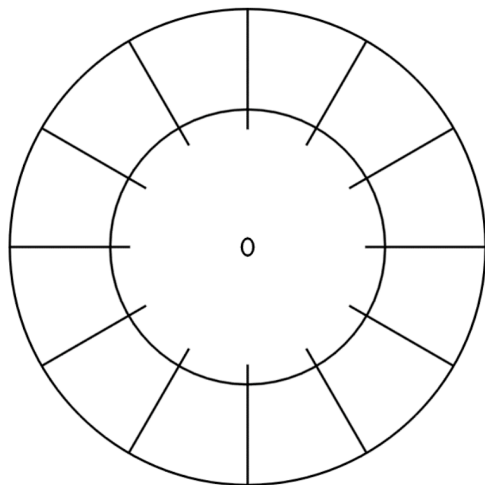
History: not remarkable, referred „schisis“ - Is it schisis ?

Preoperative Findings: VA OU 0,5

preoperative



postoperative



**Case: 4**

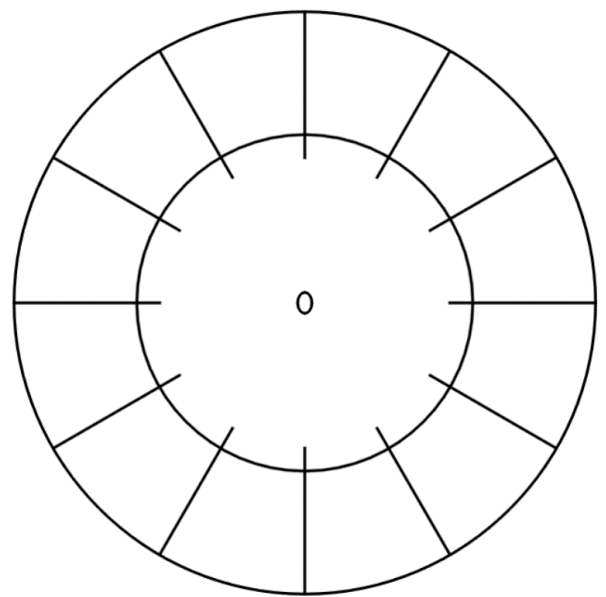
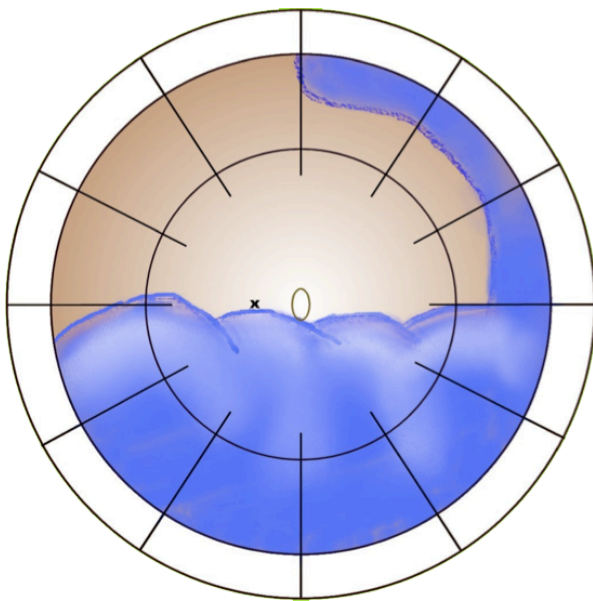
**Patient: NN, female, 51 yrs**

Complaints: blurred vision since 3 days

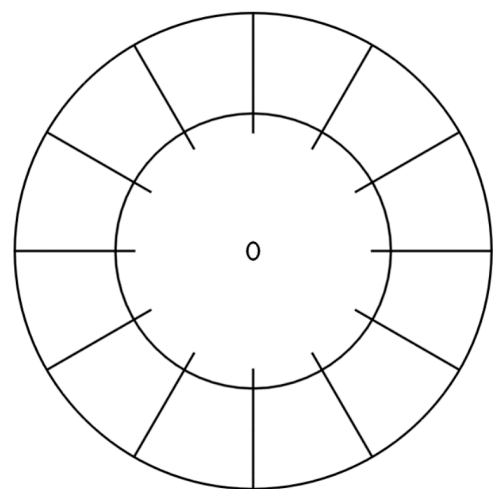
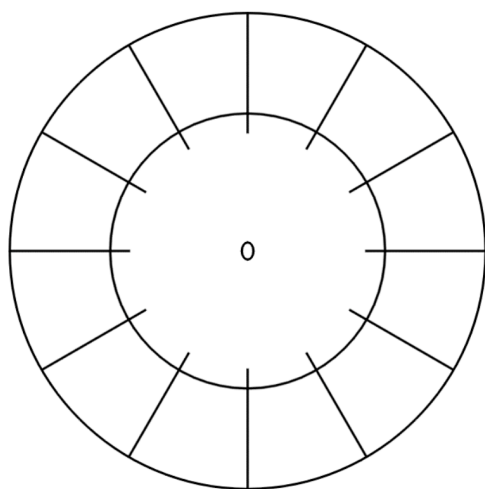
History:

Preoperative Findings: VA RA 0,2 LA 1,0

preoperative



postoperative



**Case: 5**

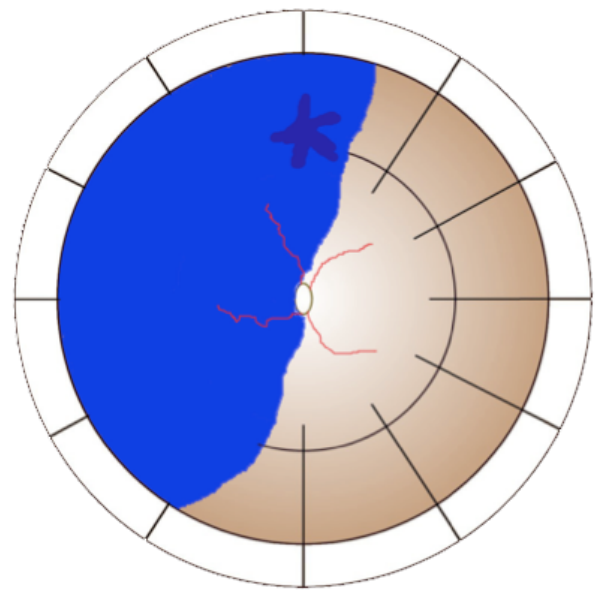
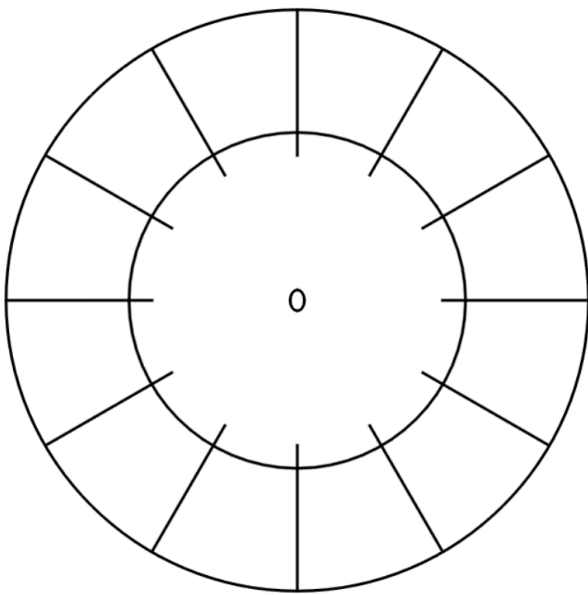
**Patient: female, 56 yrs**

Complaints: decrease of VA since 2 months

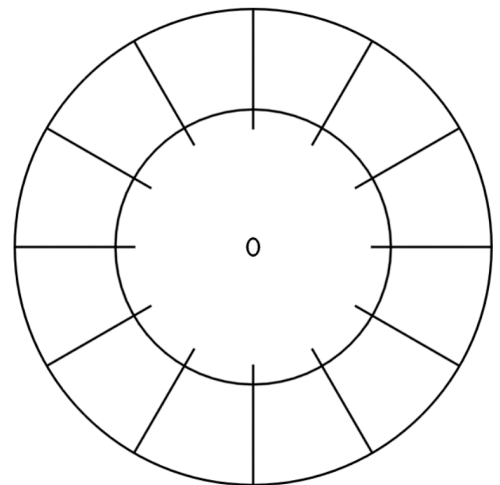
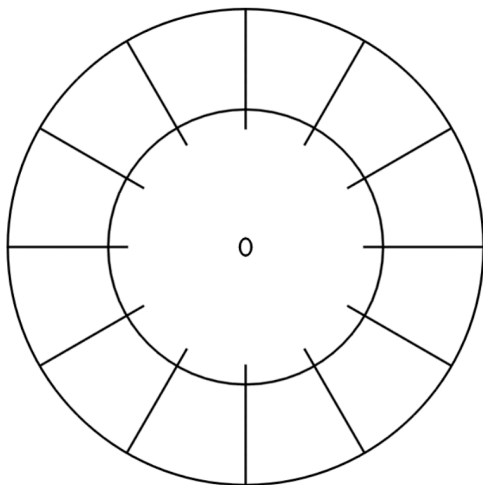
History: no

Preoperative Findings: VA OD HM OS 0,8

preoperative



postoperative



**Case: 6**

**Patient: husband of an ophthalmologist, 42 yrs**

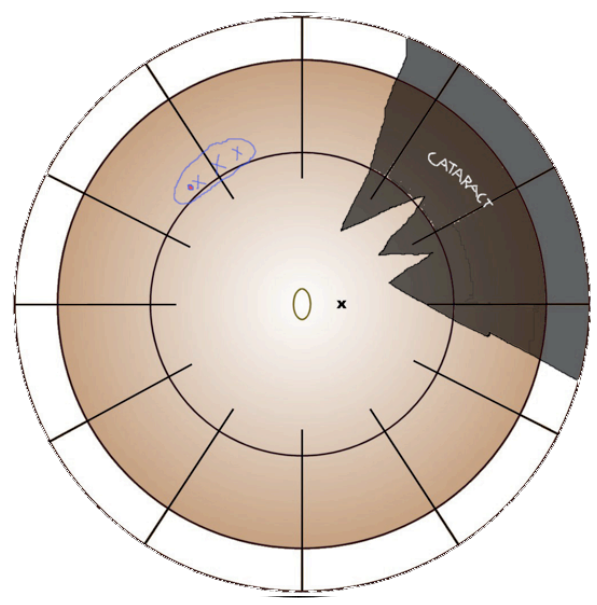
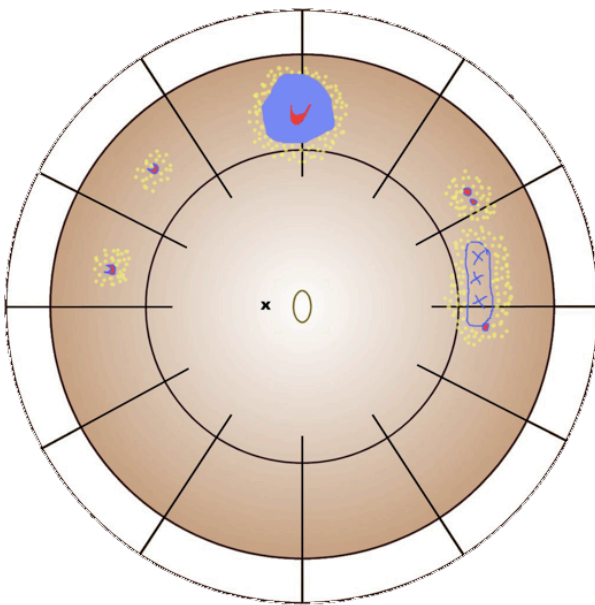
Complaints: since 2 years recurrence of flashes OD, 5 times laser treatment

History: trauma OS as a child, traumatic cataract, myopia -4,5 dpt OU

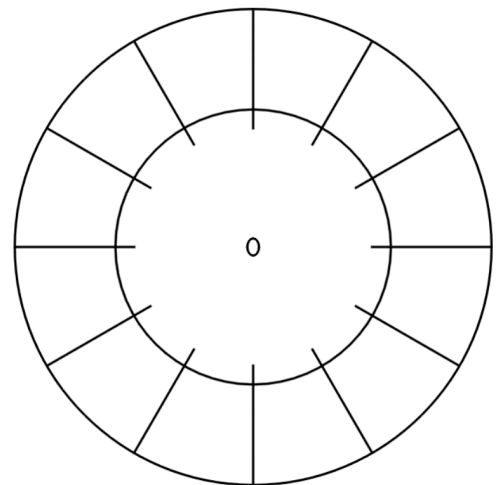
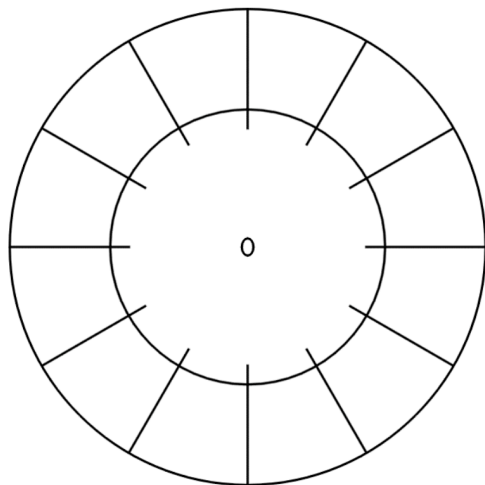
Preoperative Findings: VA OD 0,8 OS 0,6

Recommendation from the referring ophthalmologist (wife): Cerclage OD

preoperative



postoperative



**Case: 7**

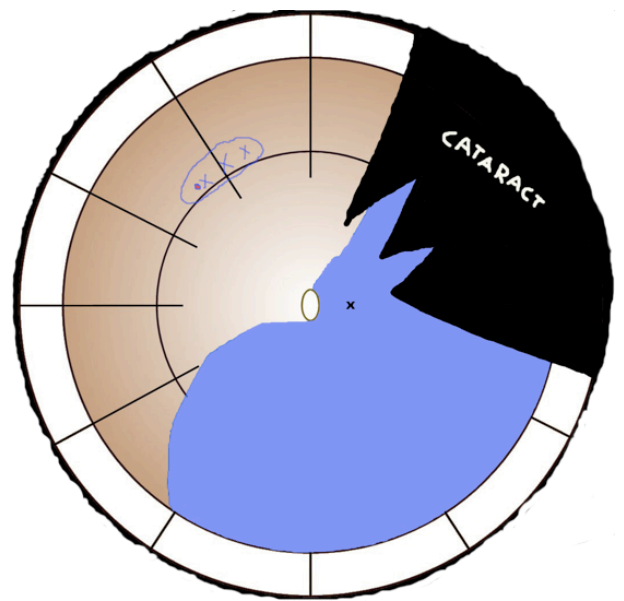
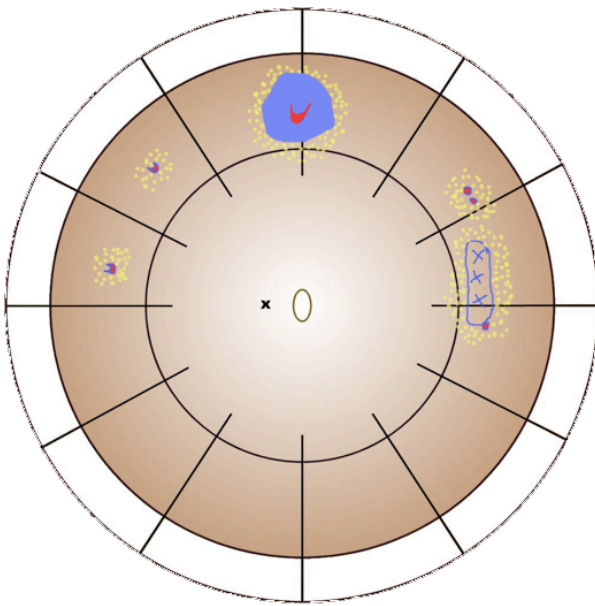
**Patient: same patient as case 8!**

Complaints: 4 months later: flashes and decrease of VA OS

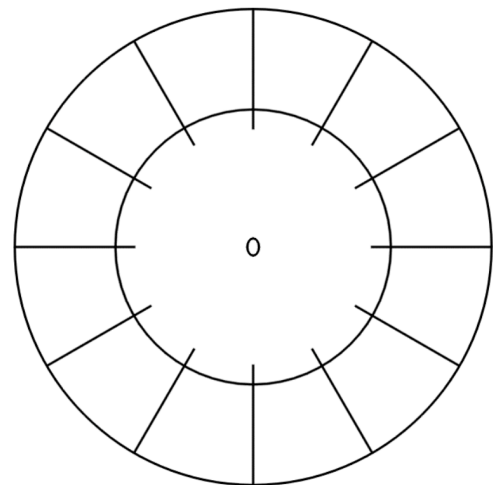
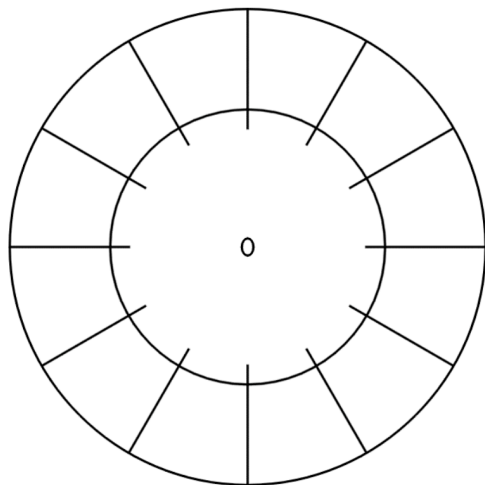
History:

Preoperative Findings:

preoperative



postoperative





**Case: 8**

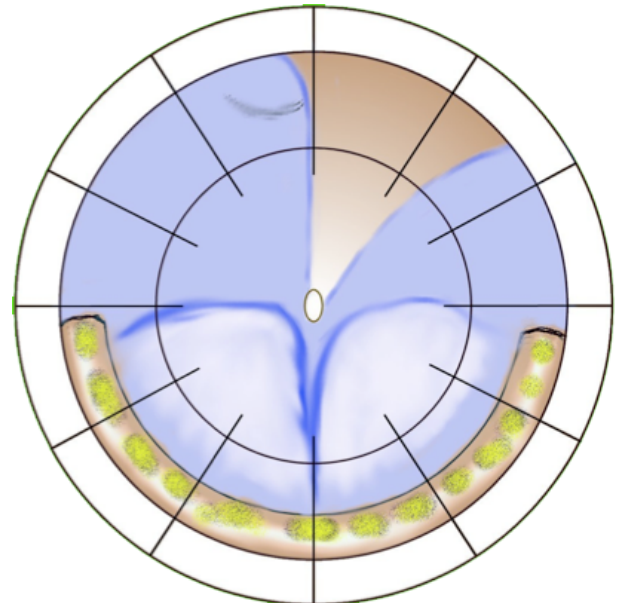
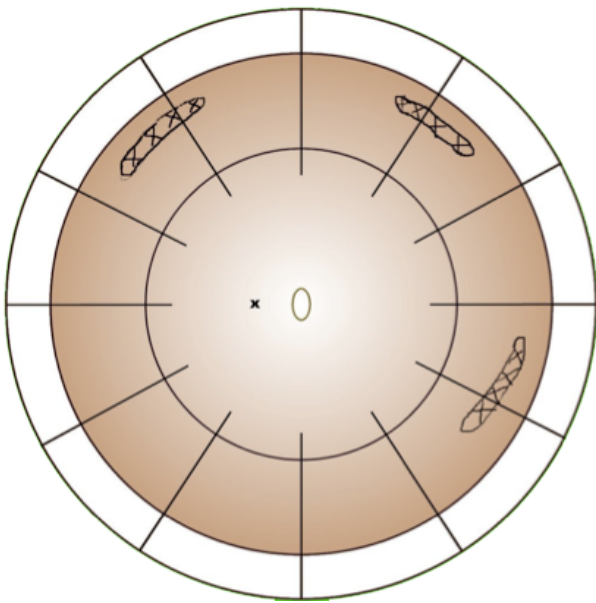
**Patient: B.P., male, 53 yrs**

Complaints: loss of vision since 3 weeks

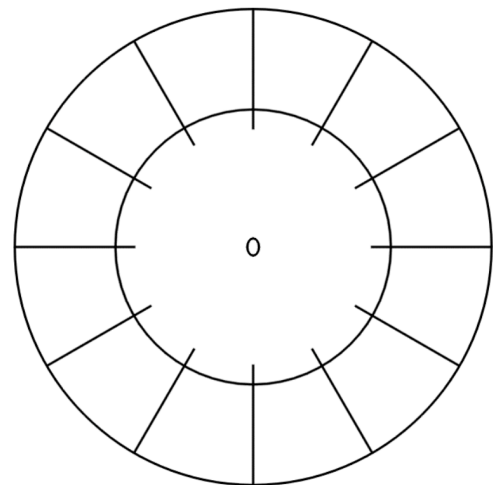
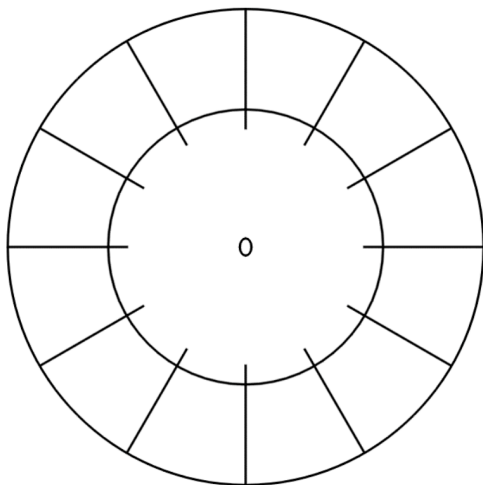
History: inferior high bullous detachment --> buckle surgery 3 - 6 - 9; PPV with Oil, Oil removal;  
secondary glaucoma with cup/disc ratio 0,9

Preoperative Findings: VA RA 0,8 LA CF

preoperative



postoperative



**Case: 9**

**Patient: female, 72 yrs**

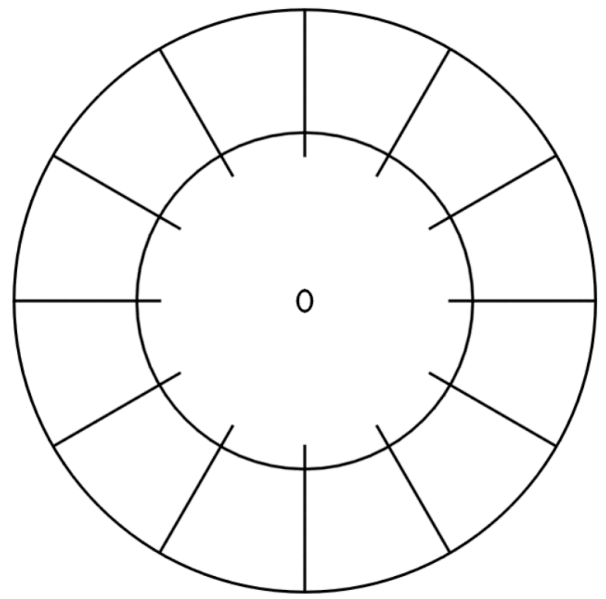
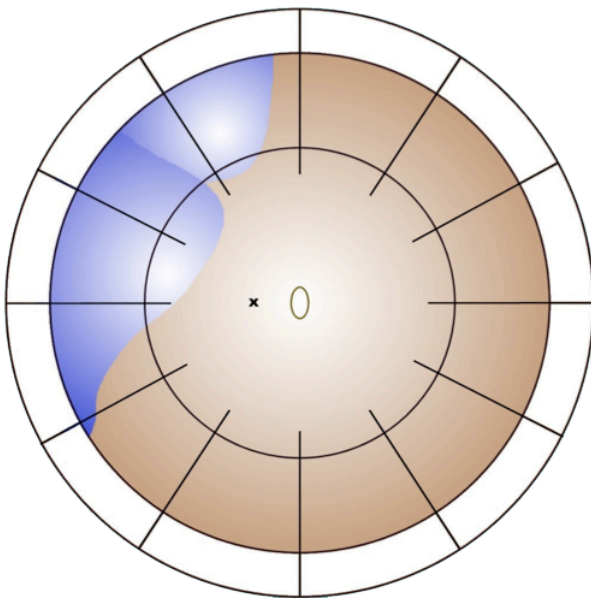
Complaints:

History: emmetropia

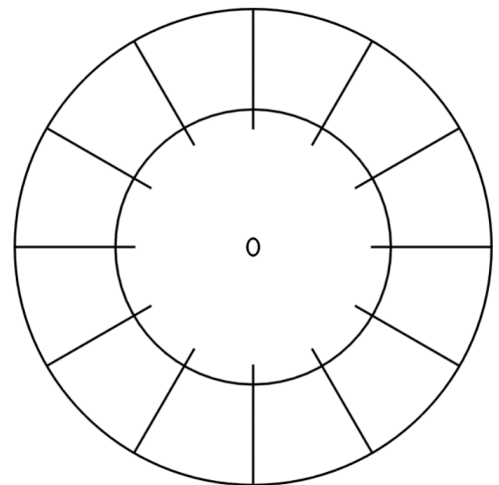
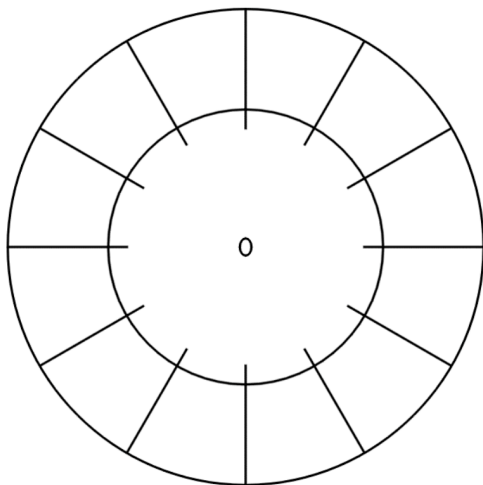
Preoperative Findings: quadrant detachment VA 1,0 OU

„emergency operation“ elsewhere: sponge cryo drainage, i.o. air

preoperative



postoperative



**Case: 10**

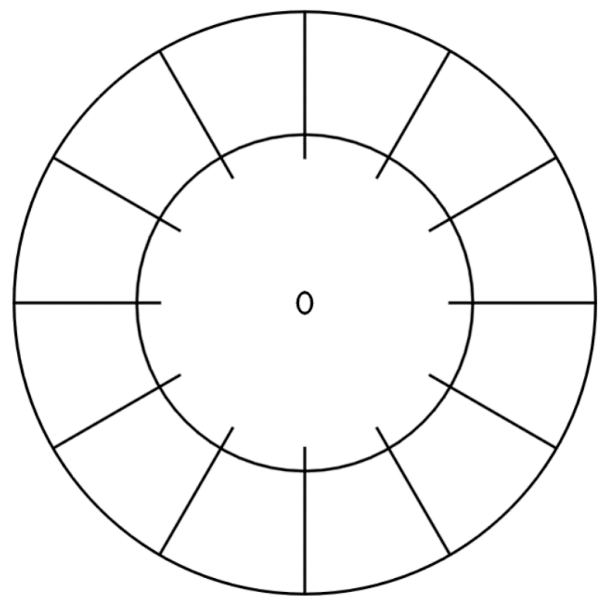
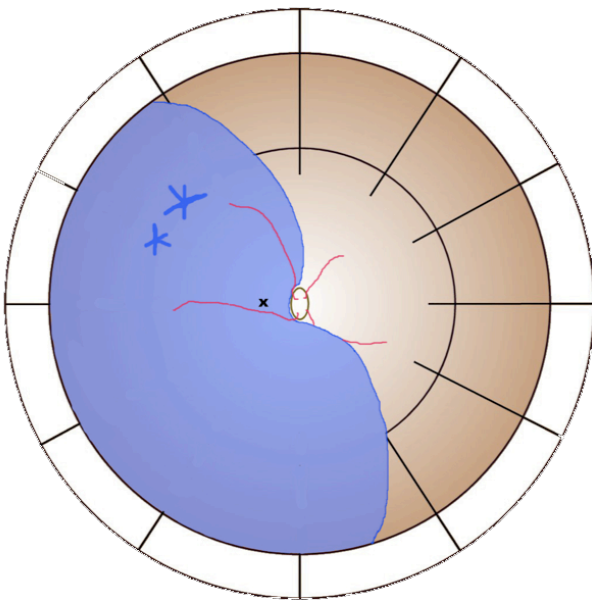
**Patient: 84 yrs, male**

Complaints: loss of vision since 1 week

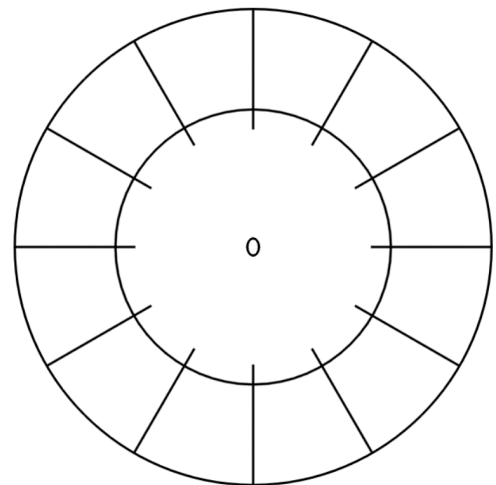
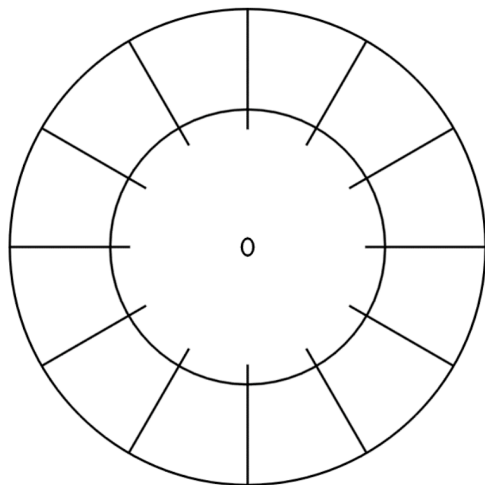
History: cataract surgery 2006

Preoperative Findings: macula off, VA OD 0,1 OS 1,0  
PVR Cp1

preoperative



postoperative



**Case: 11**

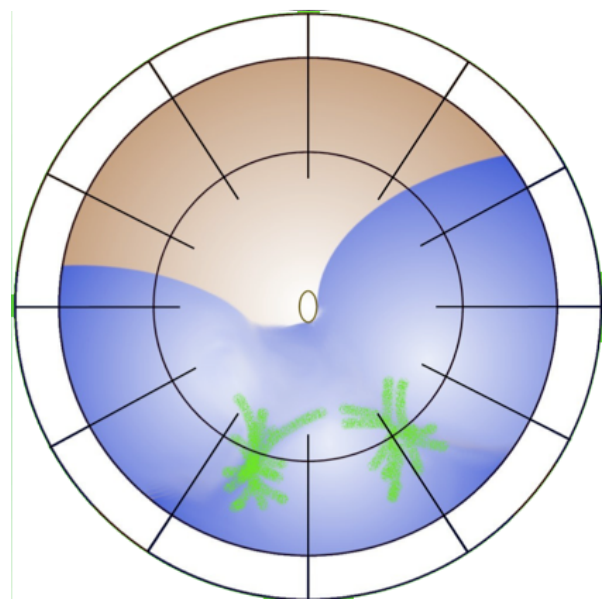
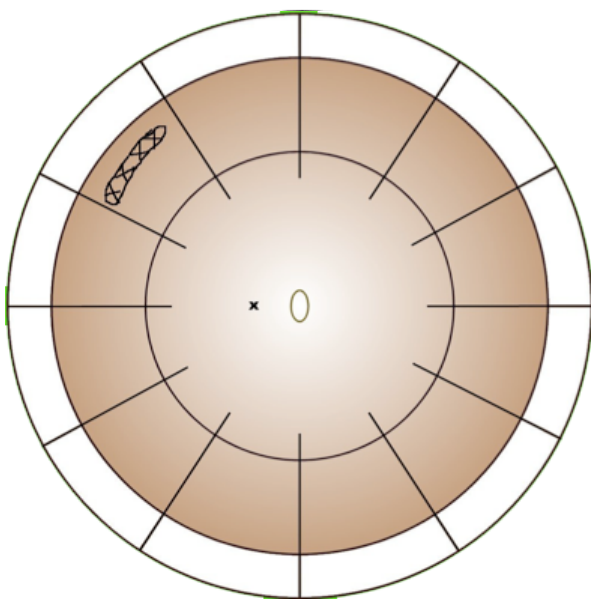
**Patient: N.N. female, 62 yrs**

Complaints: blurred vision 4 weeks

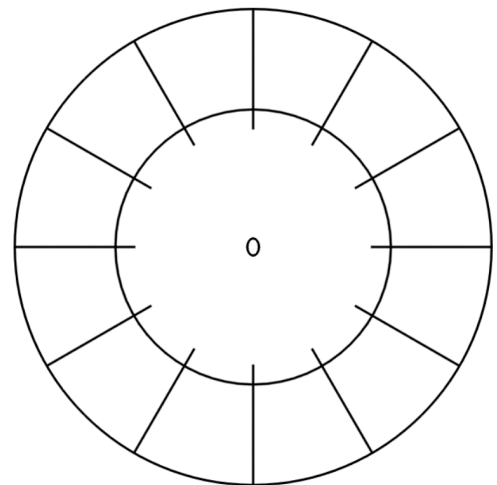
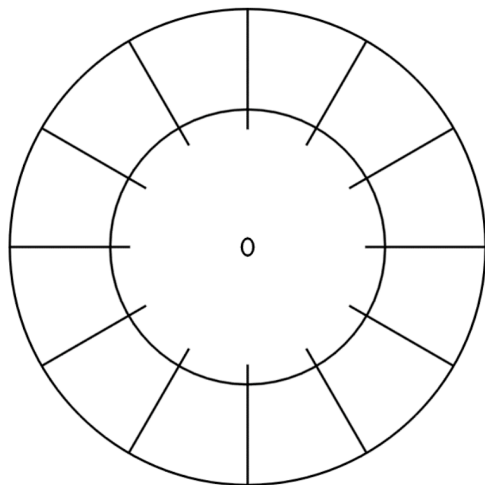
History:

Preoperative Findings: VA RA 1,0 LA 0,4

preoperative



postoperative



**Case: 12**

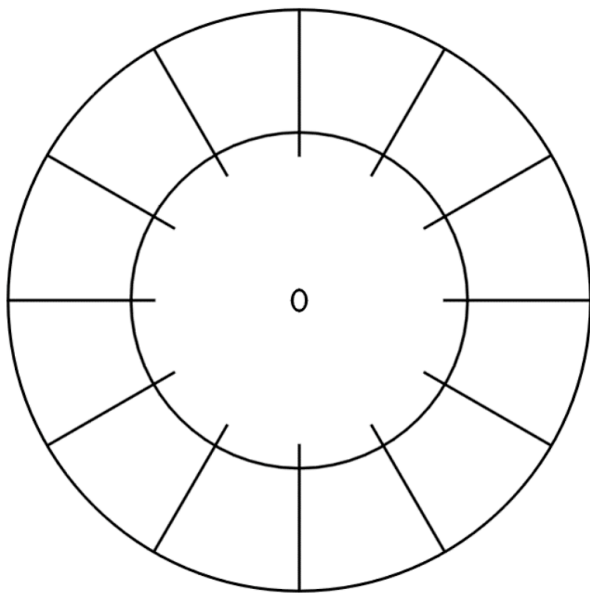
**Patient: male, 32 yrs**

Complaints: decrease of VA since 3 weeks, referral ophthalmologist: CSC

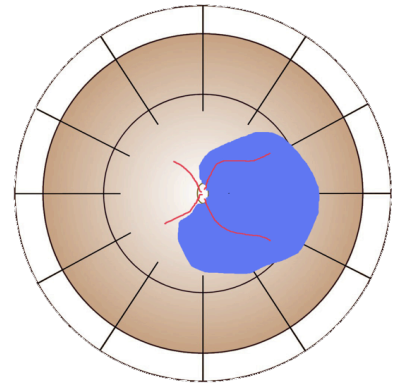
History: myopia -3 dpt OU

Preoperative Findings: VA OD 1,0 OS 0,2

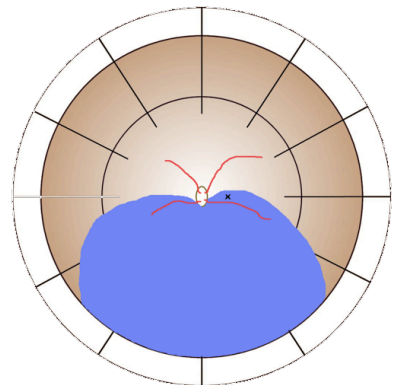
preoperative



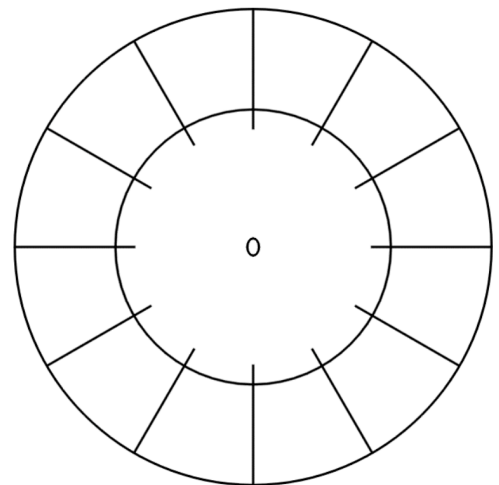
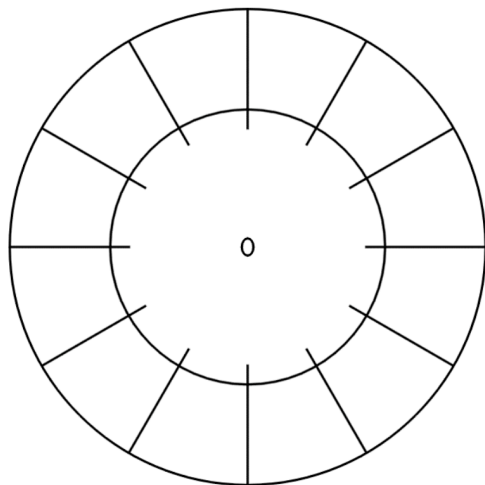
sitting position



horizontal position



postoperative



**Case: 13**

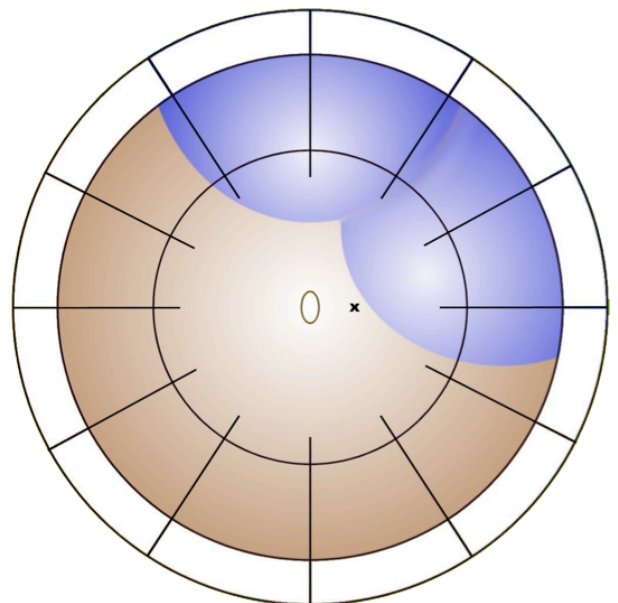
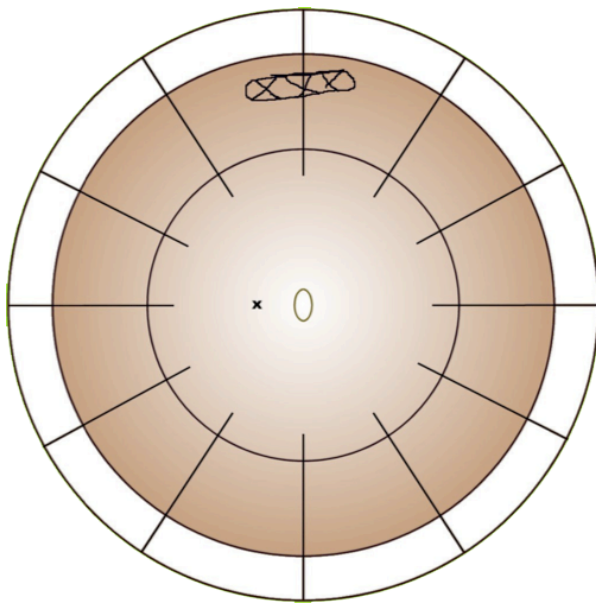
**Patient: N.N. female, 35 yrs**

Complaints: shadow and decrease of VA since 4 days

History: myopia -4,0 dpt

Preoperative Findings: VA RA 1,0 LA 0,3

preoperative



postoperative

