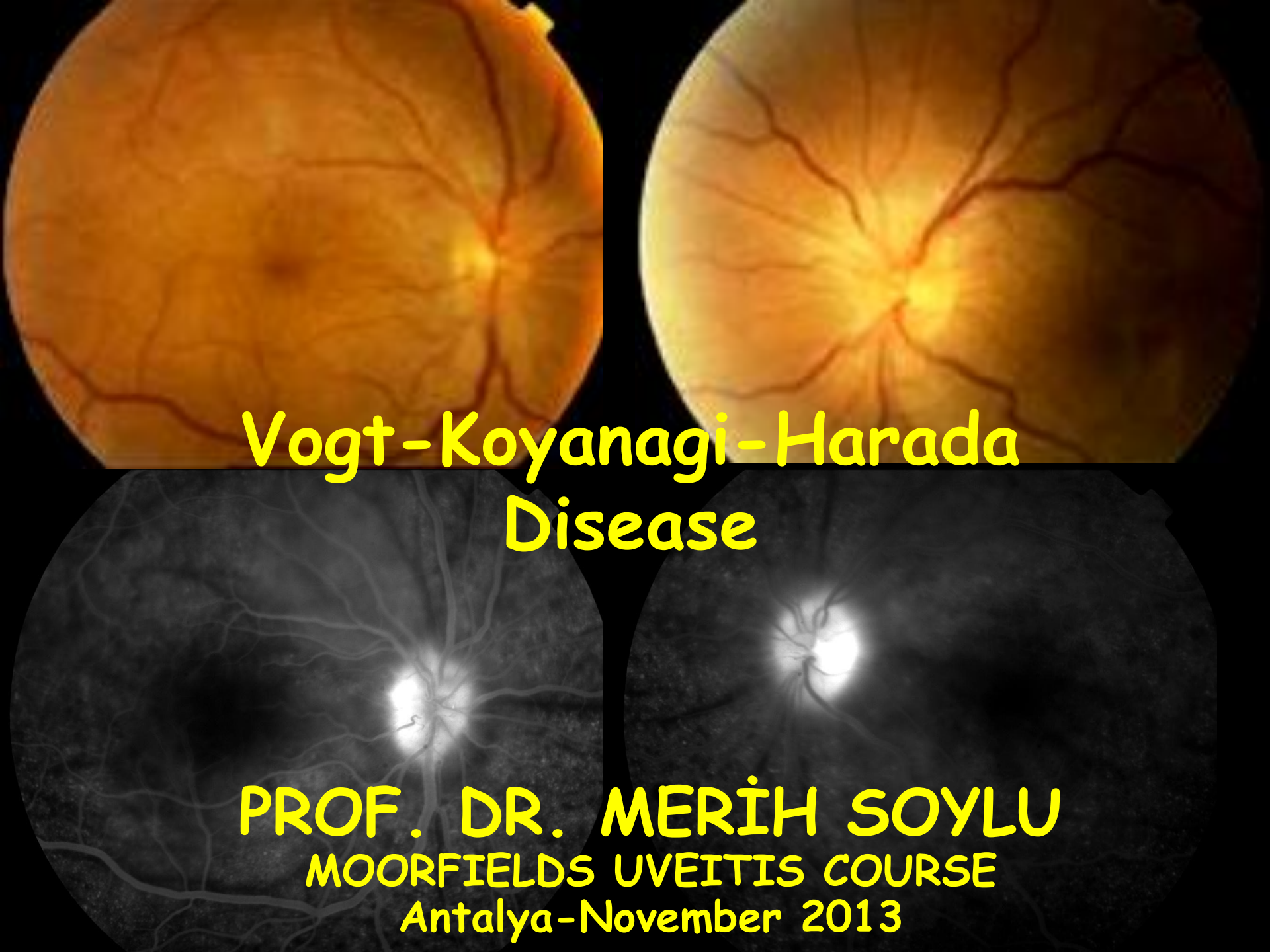


Vogt-Koyanagi-Harada Disease

PROF. DR. MERİH SOYLU

MOORFIELDS UVEITIS COURSE

Antalya-November 2013

Vogt-Koyanagi-Harada Disease

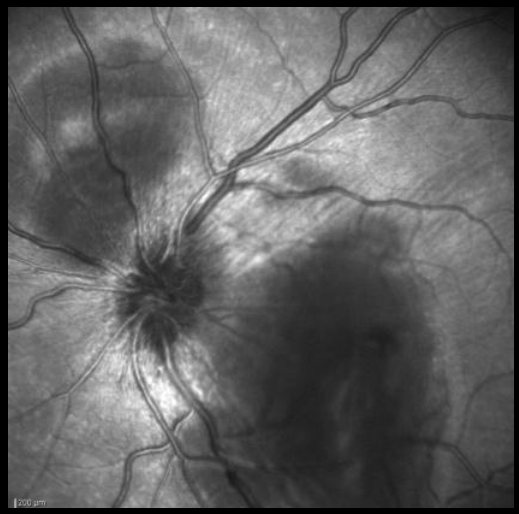
- Multisystemic autoimmune disease
- Immune reaction against the antigens in melanocytes
- Ocular, CNS, auditory and integumentary system involvement
- Primary stromal choroiditis
- Bilat. granulomatous panuveitis
- 30-40 years, F>M
- Visual prognosis is favorable
- Linked to HLA-DR4 and HLA-Dw53, with strongest associated risk for HLA-DRB1*0405 haplotype

TABLE 1. Diagnostic Criteria for Vogt-Koyanagi-Harada Disease

Complete Vogt-Koyanagi-Harada disease (criteria 1 to 5 must be present)
1. No history of penetrating ocular trauma or surgery preceding the initial onset of uveitis.
2. No clinical or laboratory evidence suggestive of other ocular disease entities.
3. Bilateral ocular involvement (a or b must be met, depending on the stage of disease when examined).
a. Early manifestations of disease. (1) There must be evidence of a diffuse choroiditis (with or without uveitis, vitreous inflammatory reaction, or optic disk hyperemia), which may manifest as one of the following: (a) Focal areas of subretinal fluid, or
(b) Bullous serous retinal detachments.
(2) With equivocal fundus findings; both of the following must be present as well: (a) Focal areas of choroidal perfusion, multifocal areas of pinpoint leakage, large placoid areas of hyperfluorescence, subretinal fluid, and optic nerve staining (listed in order of sequential appearance) by fluorescein and (b) Diffuse choroidal thickening, without evidence of posterior scleritis by ultrasonography.
b. Late manifestations of disease. (1) History suggestive of prior presence of findings from 3a, and (2) and (3) below, or multiple signs from (3): (2) Ocular depigmentation (either of the following is sufficient): (a) Sunset glow fundus, or (b) Sugiura sign.
(3) Other ocular signs: (a) Nummular chorioretinal depigmented scars, or (b) Retinal pigment clumping and/or migration, or (c) Recurrent or chronic anterior uveitis.
4. Neurological/auditory findings (may have resolved by time of examination).
a. Meningismus (malaise, fever, headache, nausea, abdominal pain, stiffness of the neck and combination of these factors; headache alone is not sufficient to meet definition of meningismus
b. Tinnitus, or
c. Cerebrospinal fluid pleocytosis.
5. Integumentary finding (*not* preceding onset of central nervous system or ocular disease).
a. Alopecia, or
b. Poliosis, or
c. Vitiligo.
Incomplete Vogt-Koyanagi-Harada disease (criteria 1 to 3 and either 4 or 5 must be present)
1. No history of penetrating ocular trauma or surgery preceding the initial onset of uveitis, and
2. No clinical or laboratory evidence suggestive of other ocular disease entities, and
3. Bilateral ocular involvement.
4. Neurologic/auditory findings; as defined for complete Vogt-Koyanagi-Harada disease above,
5. Integumentary findings; as defined for complete Vogt-Koyanagi-Harada disease above.
Probable Vogt-Koyanagi-Harada disease (isolated ocular disease; criteria 1 to 3 must be present)
1. No history of penetrating ocular trauma or surgery preceding the initial onset of uveitis.
2. No clinical or laboratory evidence suggestive of other ocular disease entities.
3. Bilateral ocular involvement as defined for complete Vogt-Koyanagi-Harada disease above.

Read RW, et al. Am J Opthalmol 131:647-652,2001

OCULAR MANIFESTATIONS

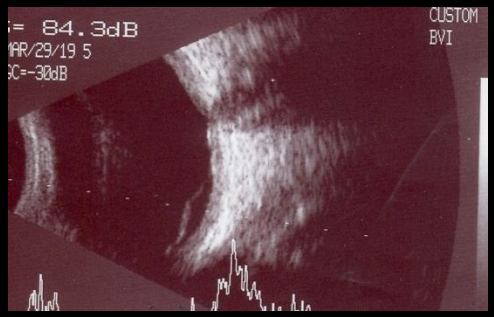


Early :

- diffuse choroiditis
  - focal areas of SRF
  - Bullous SRD
- diffuse choroidal thickening

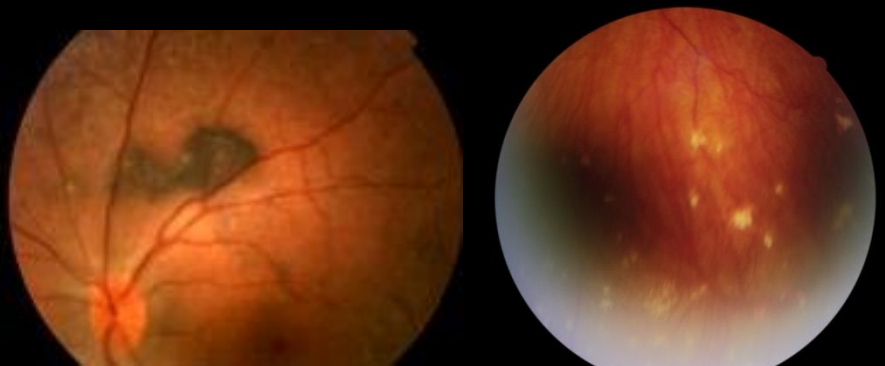
Late:

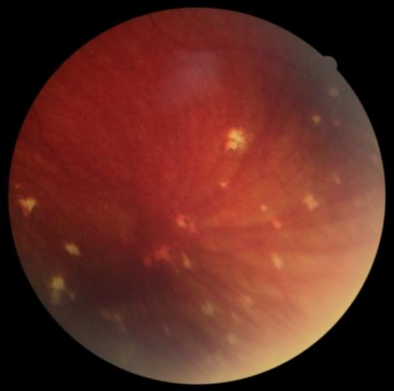
- history of early manifestations
- ocular depigmentation
  - sunset-glow fundus
  - Sugiura sign



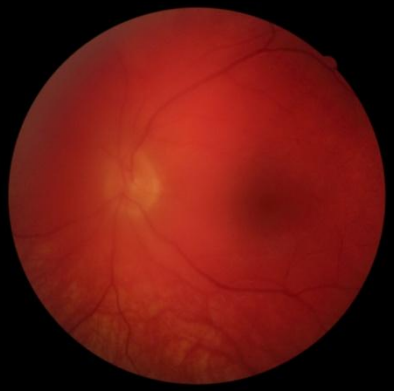
Other:

- Nummular chorioret. depigmentation,
- retinal pigment clumping/migration
- Recurrent/ch. AU





VKH



Clinical phases;

- Prodromal (like viral infection),
- Uveitic (bilat. diffuse uveitis,papillitis & SRD)
  Convalescent phase (depigmentasyon)
- Ch. recurrent phase (recurrent uveitis, complications).

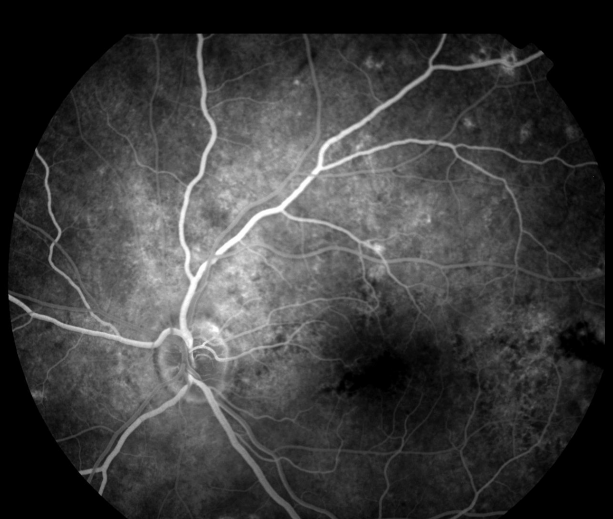
Damico FM, et al. Vogt-Koyanagi-Harada disease. Semin Ophthalmol 2005 Jul-Sep;20(3):183-90.

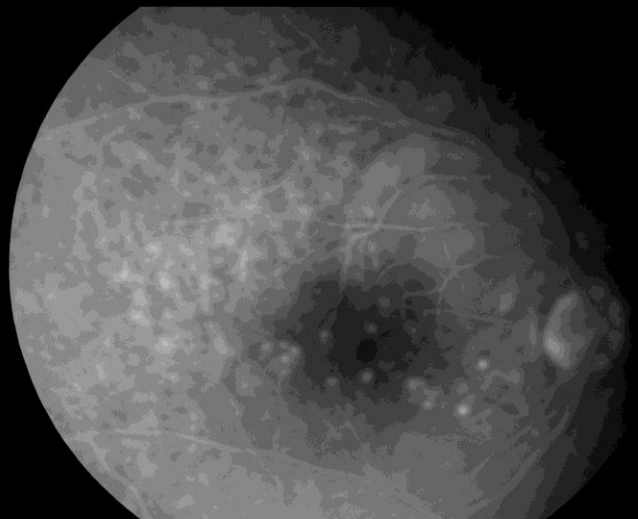
FFA

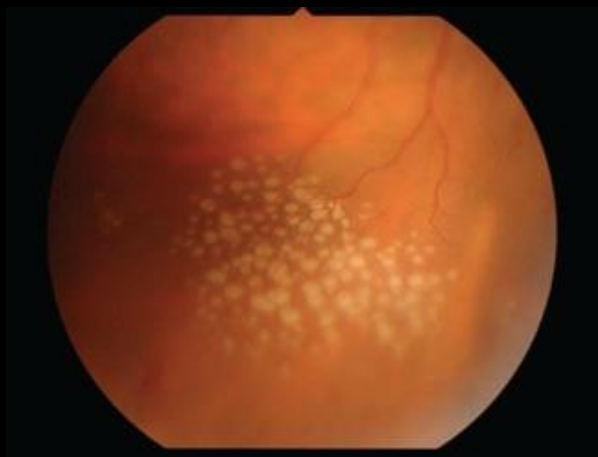
Early: Diffuse choroiditis, SRD, pinpoint hyperfluorescen spots, optic nerve staining, choroid striations, folds, subretinal fibrosis

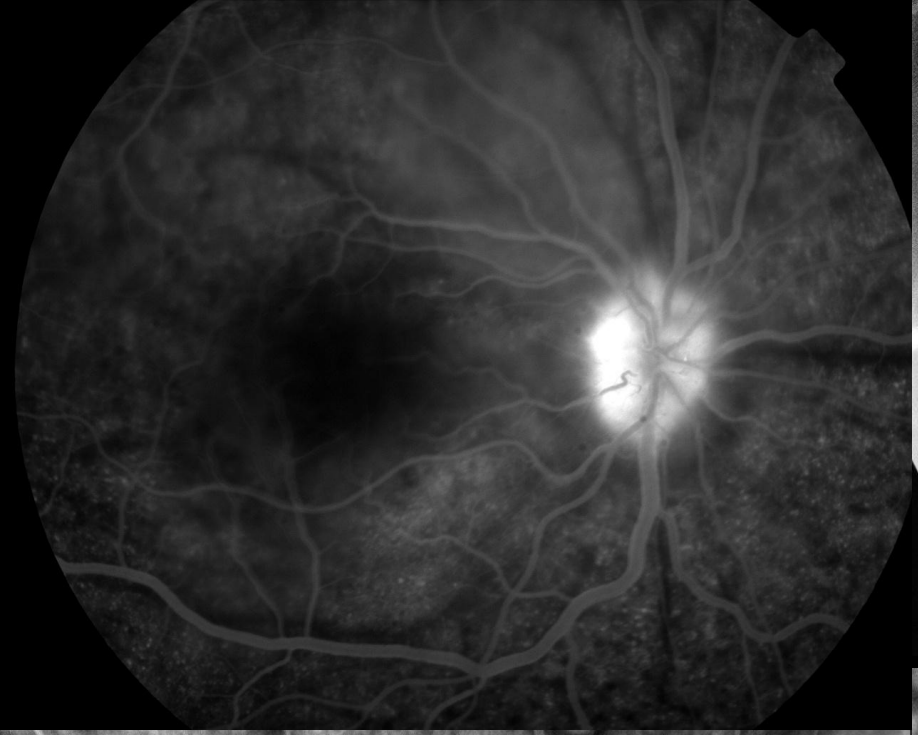
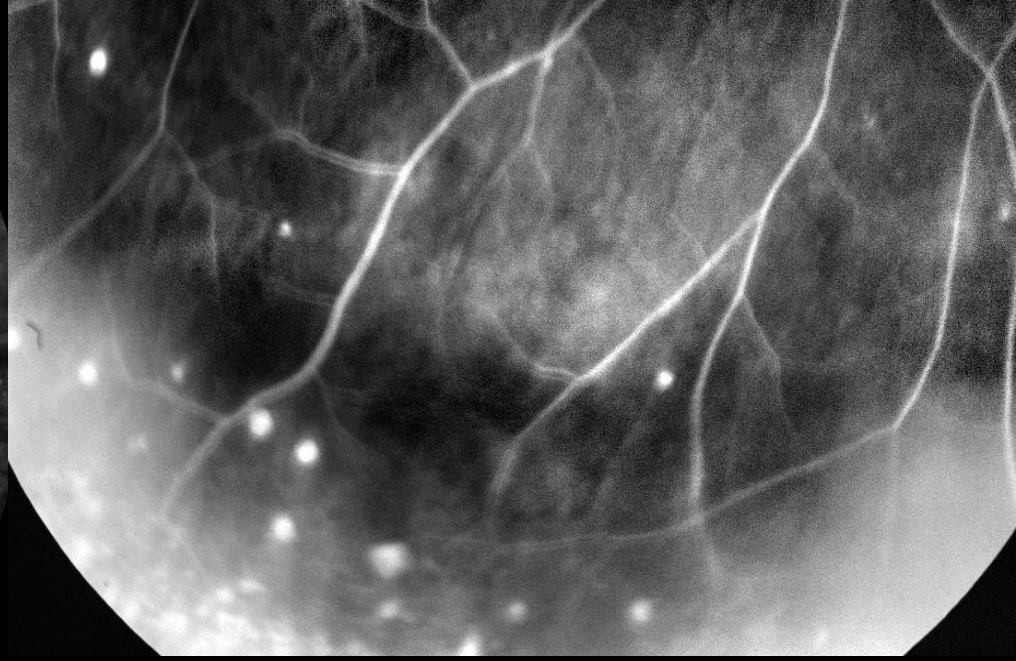
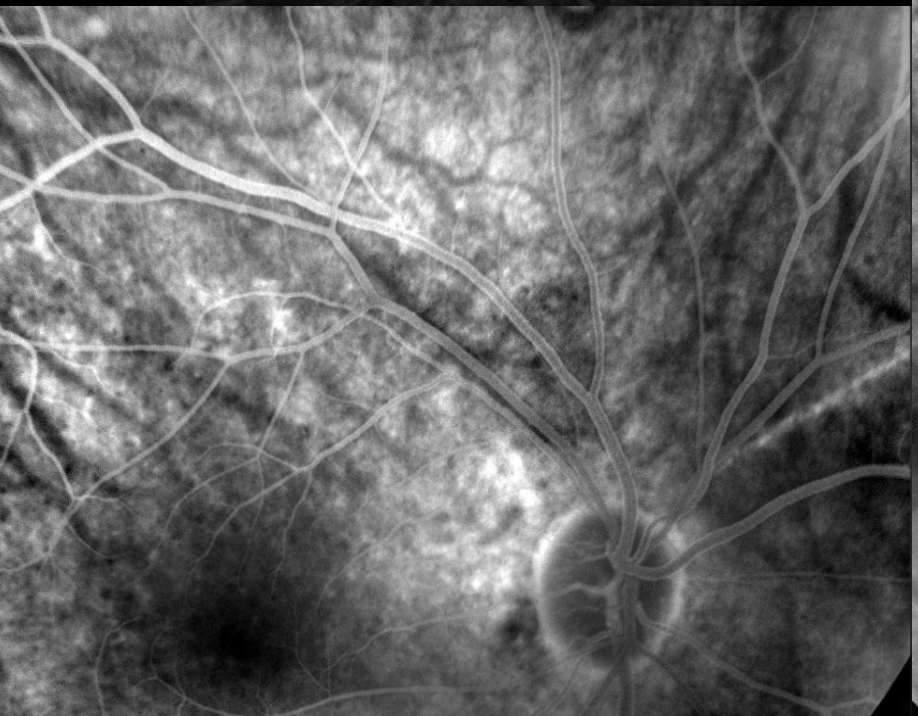
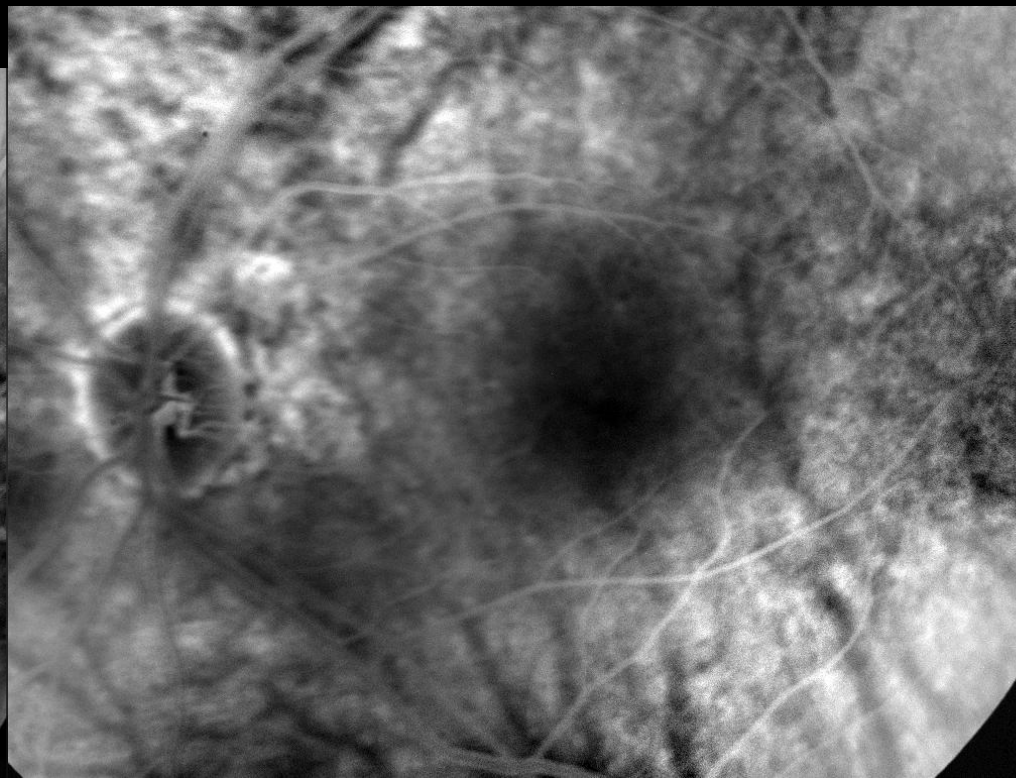
Late: Nummuler depigmented scars,multiple window defects, hypofluorescen spots (moth- eaten appearance), mutton-fat like subretinal deposits

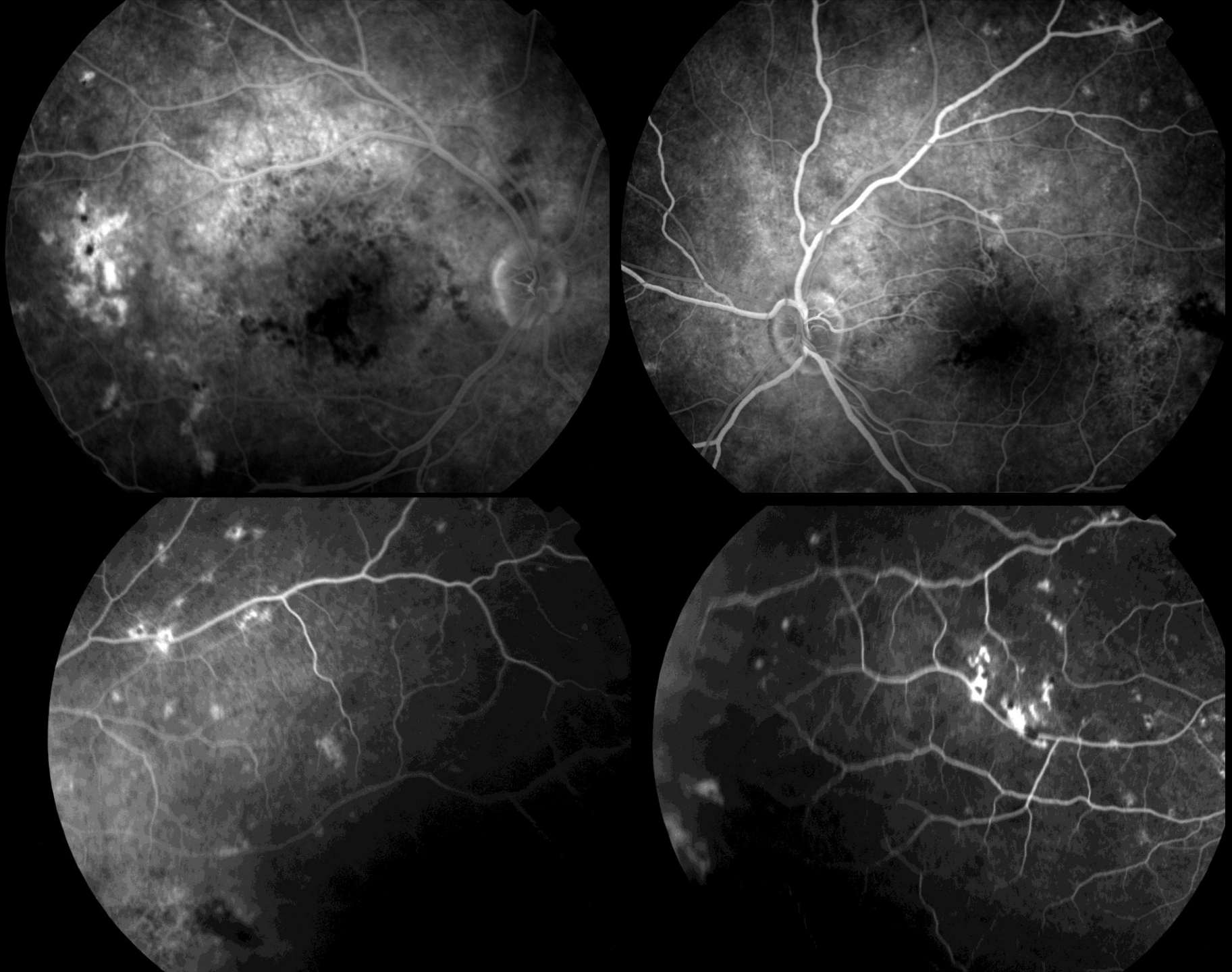
Kuniko Hamabata , et al. Ocular Immunology & Inflammation, 18(1), 44–45, 2010

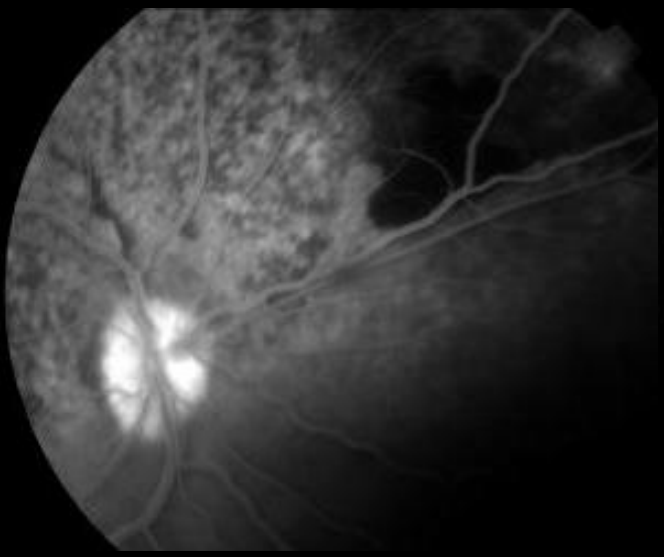
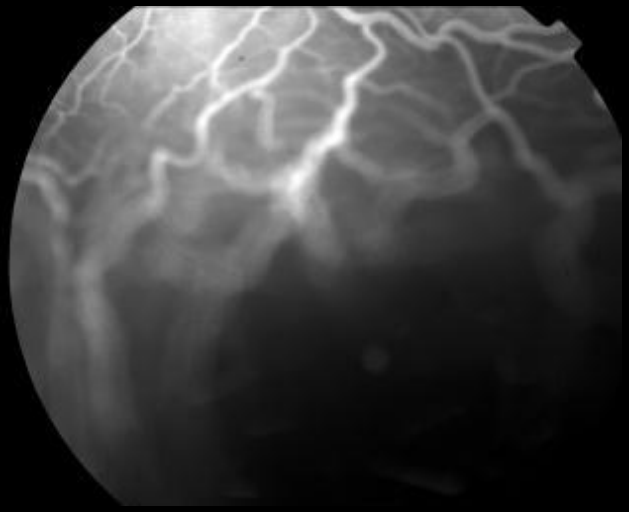
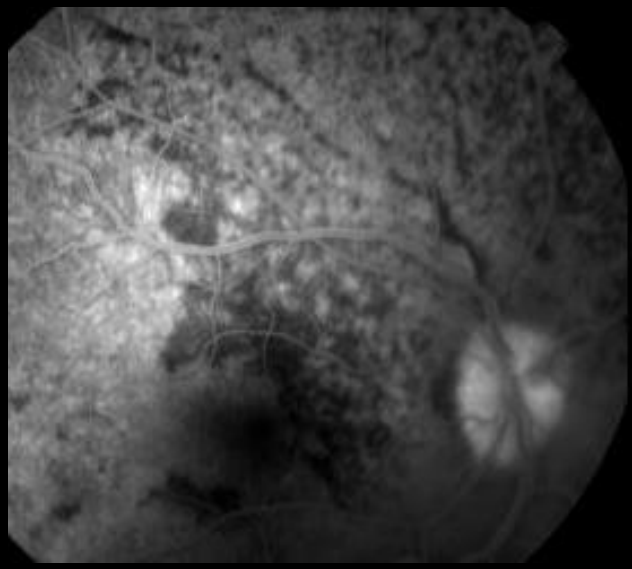
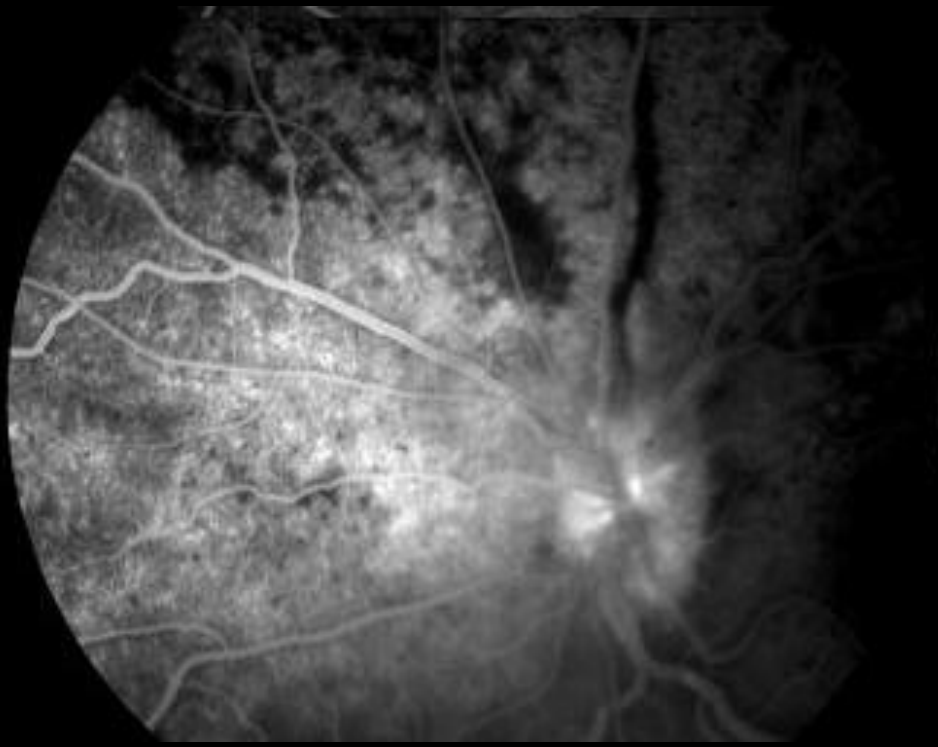
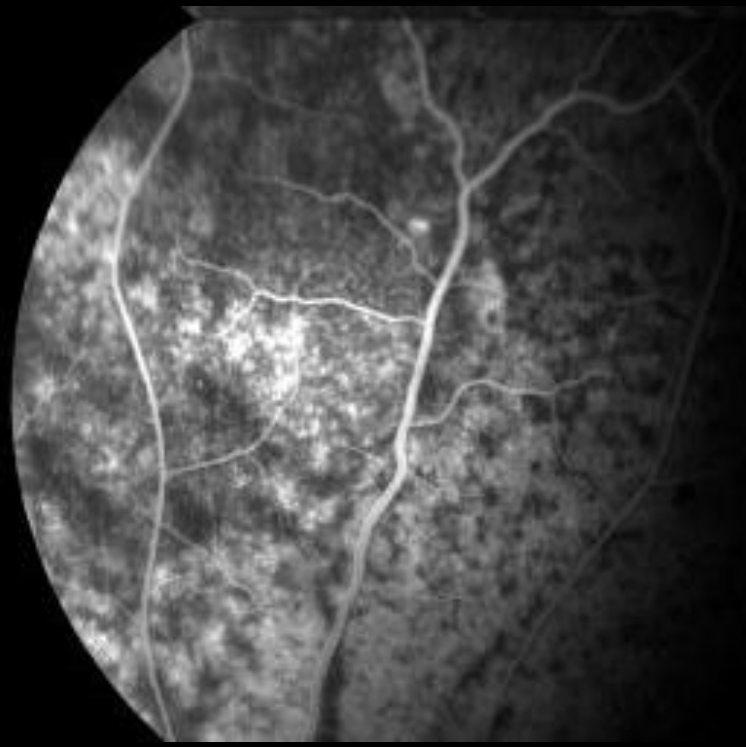


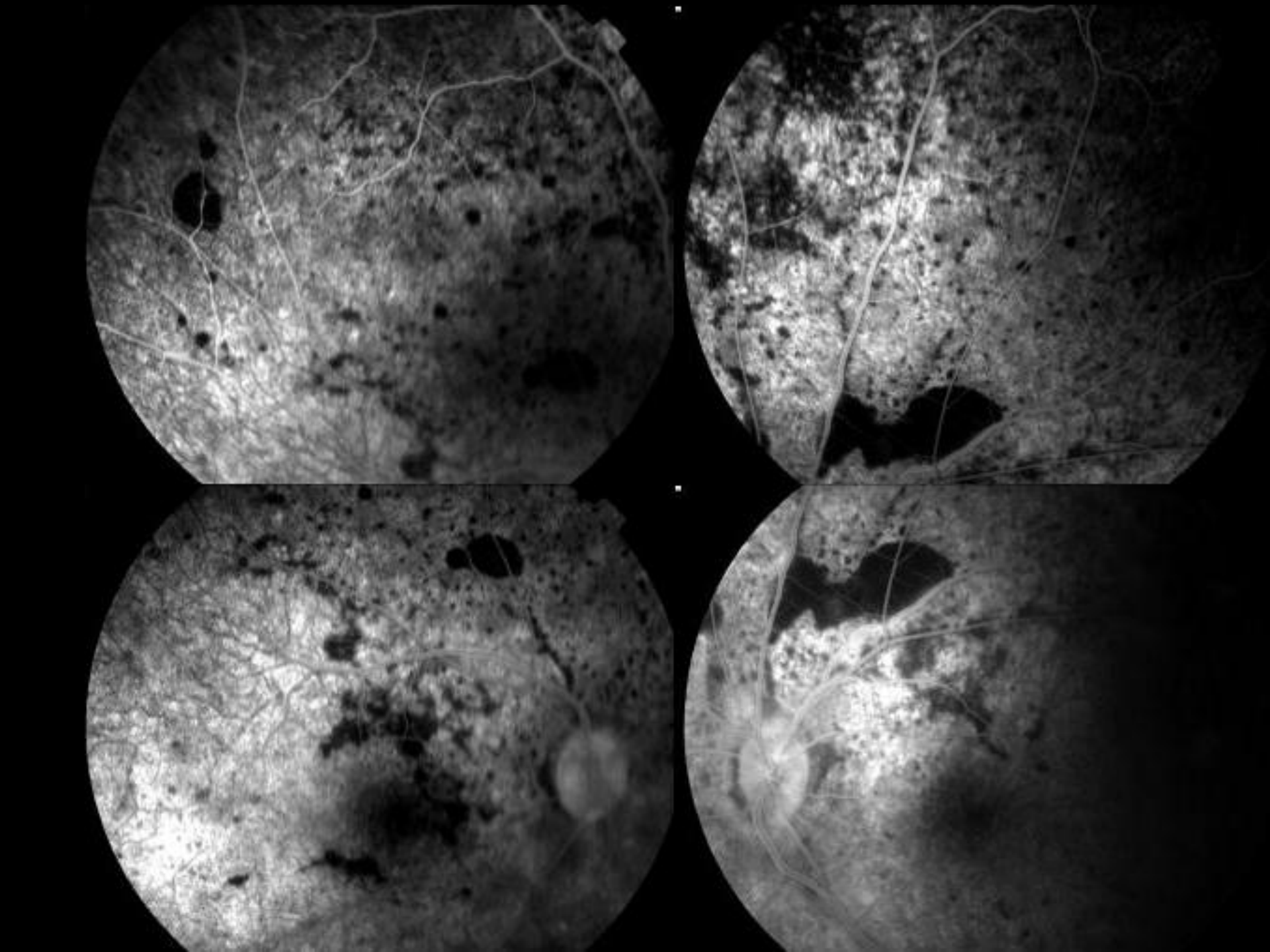








ICGA

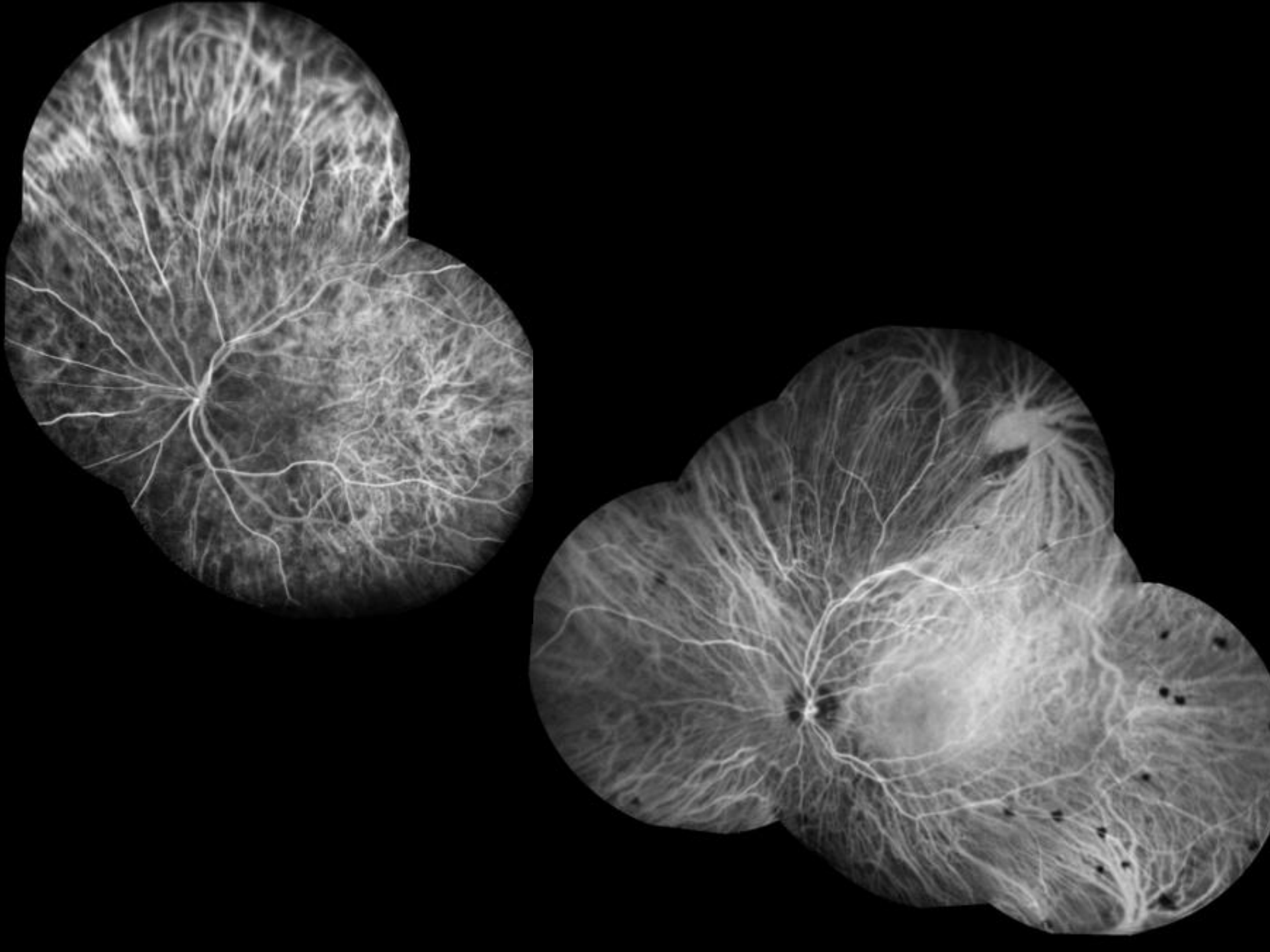
- Early hyperfluorescence (A. choroidal vasculitis),

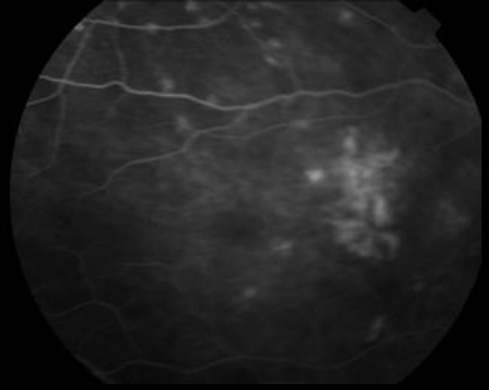
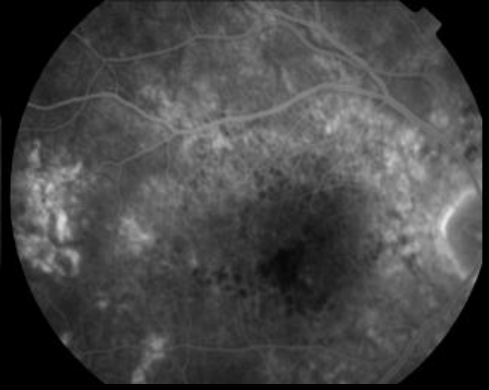
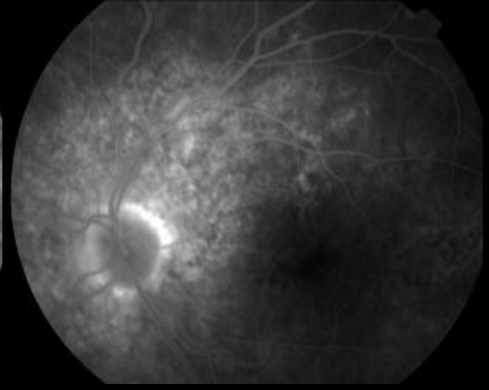
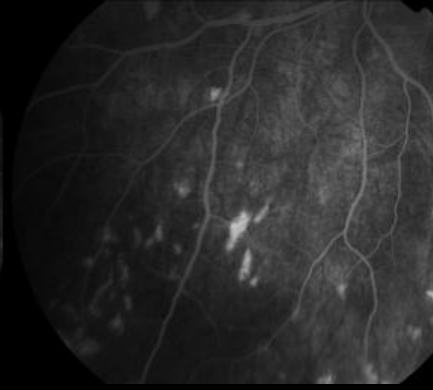
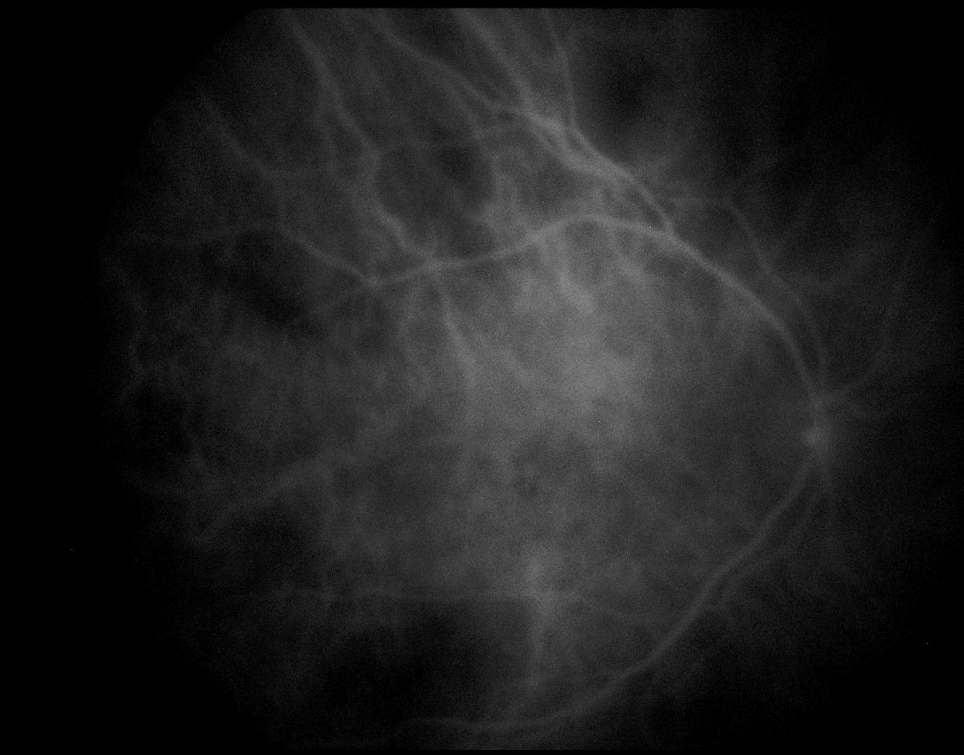
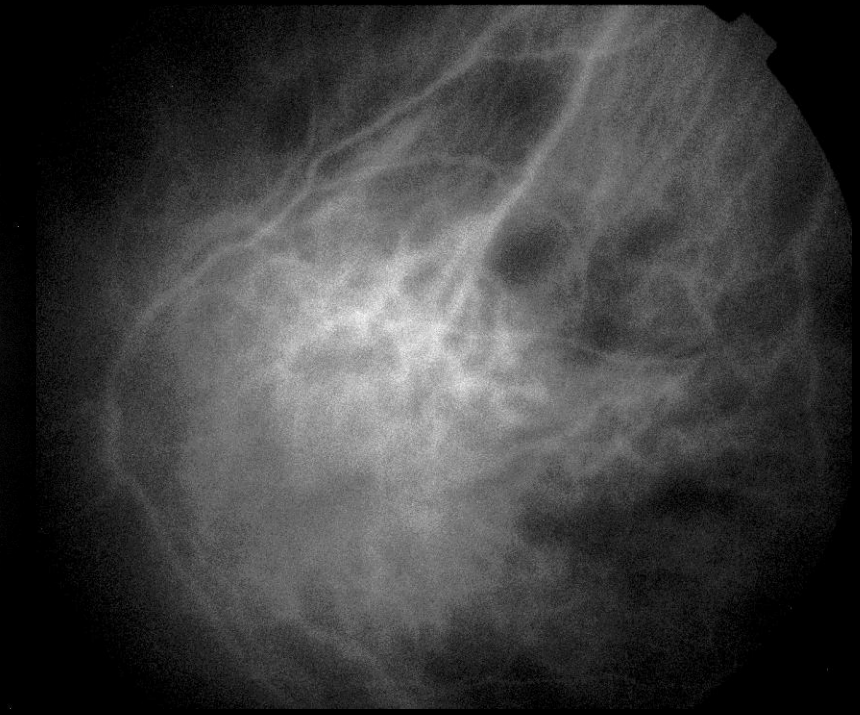
  blurring of choroid stomal vessels in middle and late phases (inflammatory vasculopaty)

  optic disc hyperfluorescence (hiperacute disease)

  hypofloresan dark spots (HDD)(choroideal inflammatory spots)
- Helpful in suspected cases, in cases without acute symptoms, in subclinical inflammation
- More informative than FFA, helpful in monitoring disease activity

- Bouchenaki N, Herbort CP. J Ophthalmic Vis Res. 2011 6(4): 241–248.

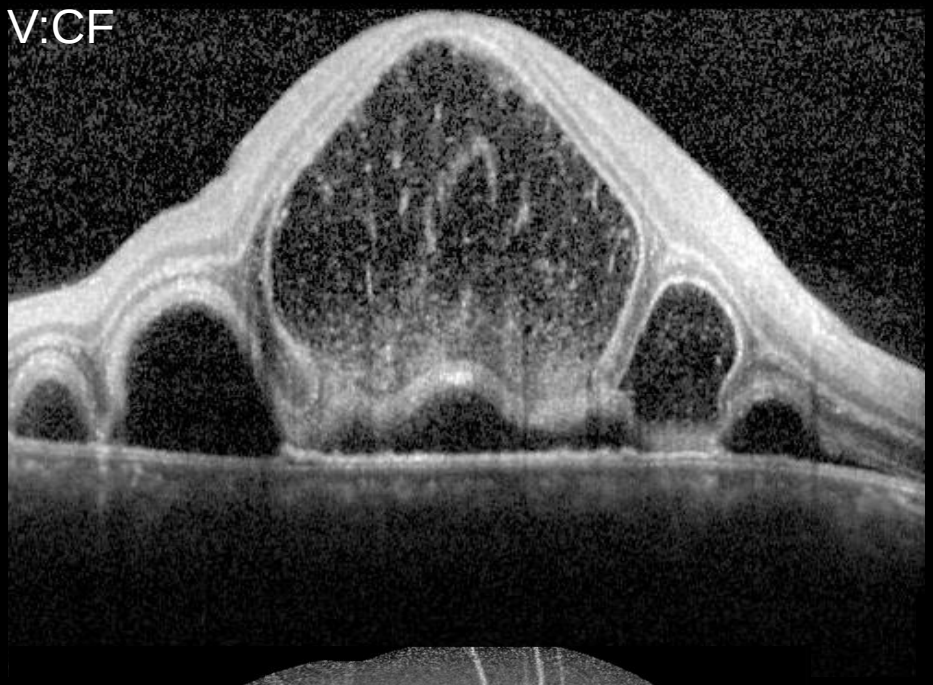


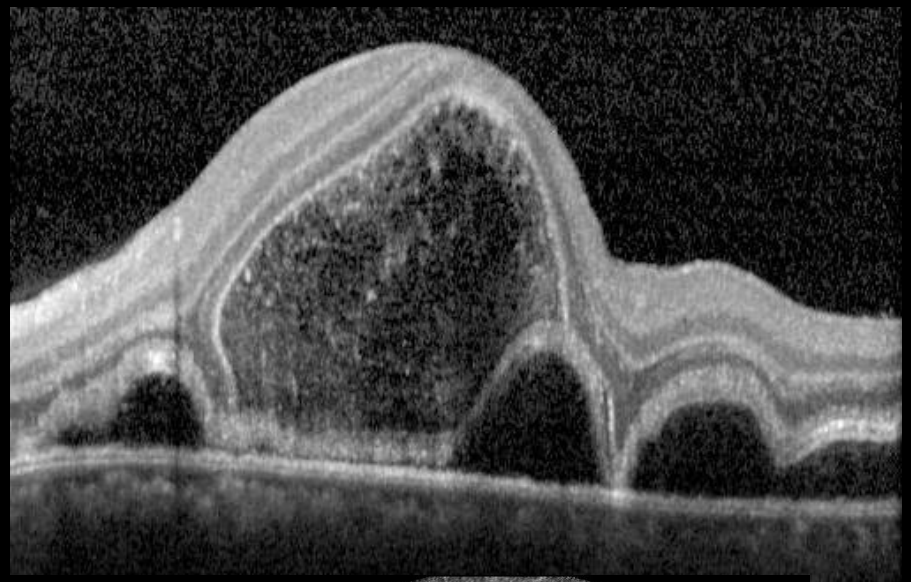







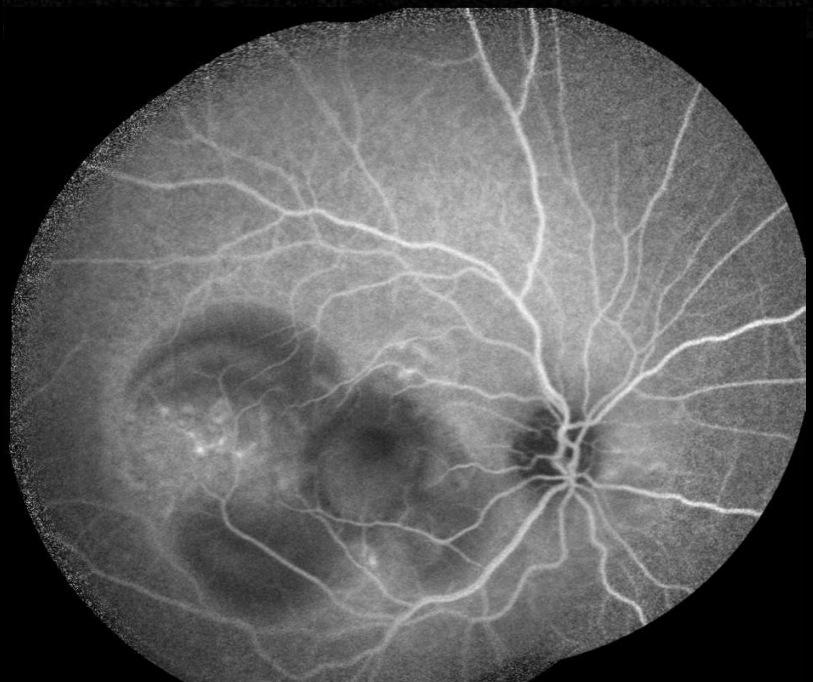
OCT

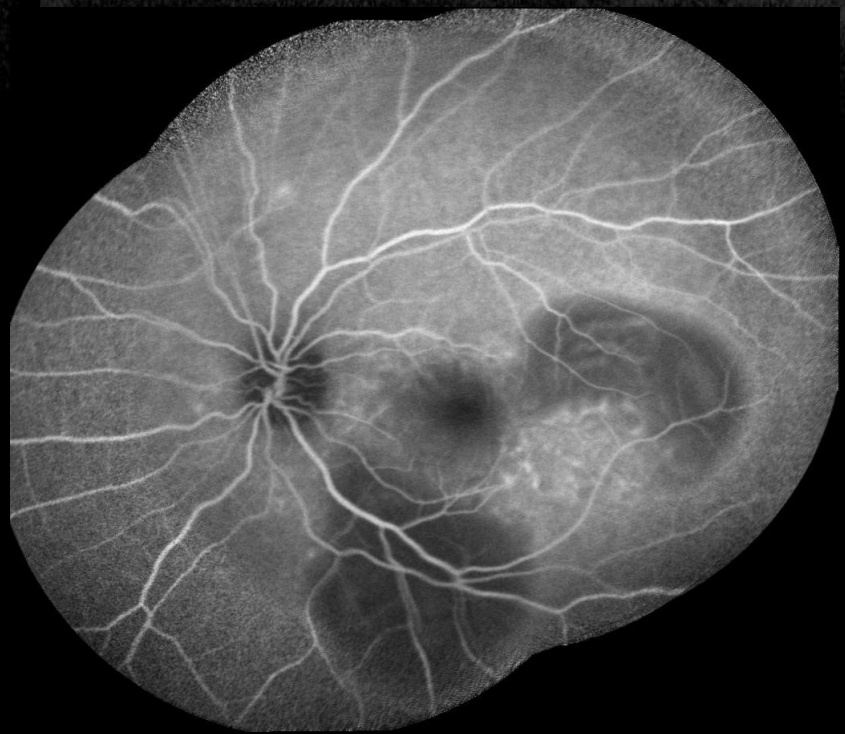
- Shows the severity of the disease and dynamic changes in the macula
- Reflects the effect of treatment, guide the tapering of ST
- The membranous form is made of inflammatory products (fibrin)
- The initial VA is worse in eyes with a higher SRD, no correlation between initial VA and SRT
- ILM–IPL thickness in the acute phase is significantly greater than that in the convalescent phase at each point of the retina
  - Ikewaki J, et al. Optical coherence tomographic assessment of dynamic macular changes in patients with Vogt–Koyanagi–Harada Disease. Int Ophthalmol (2011) 31:9–13

16 y/o F
V:CF

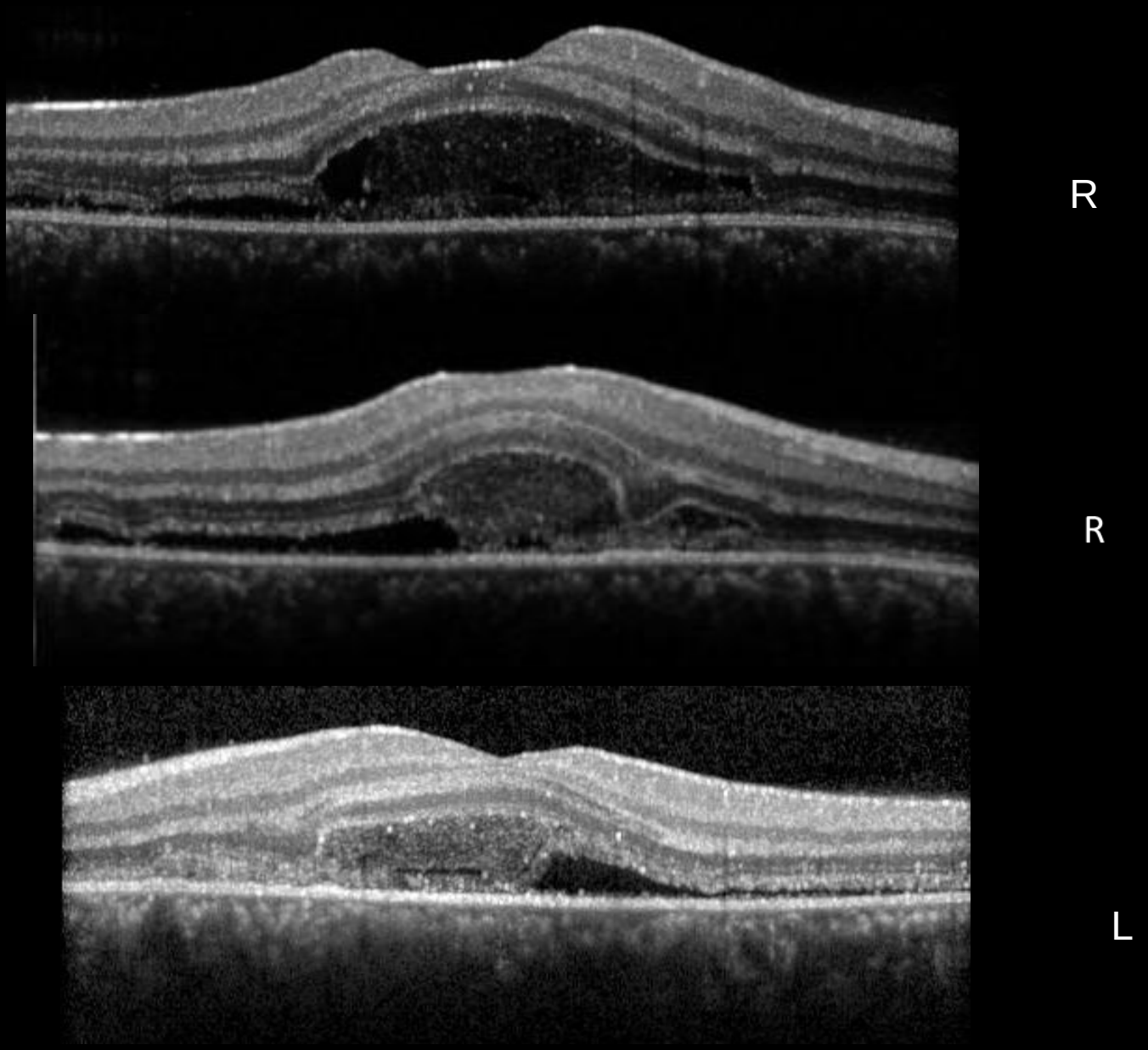




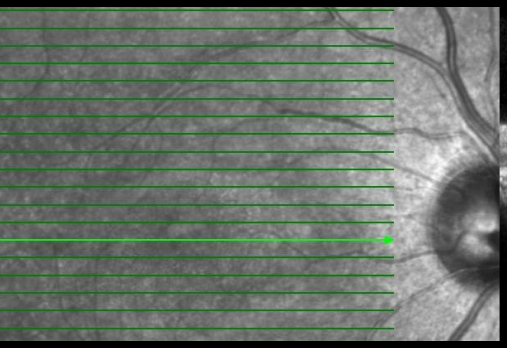


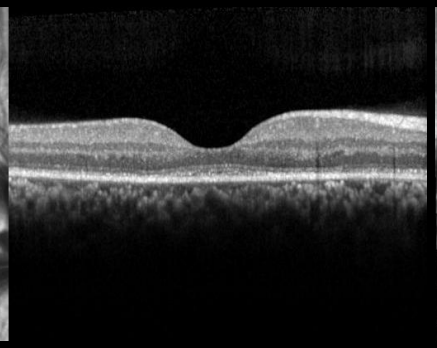


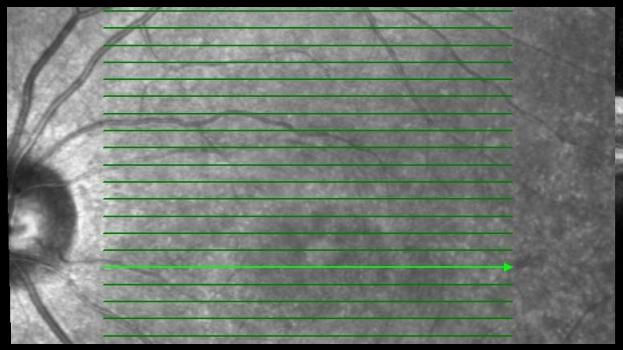
Day 3

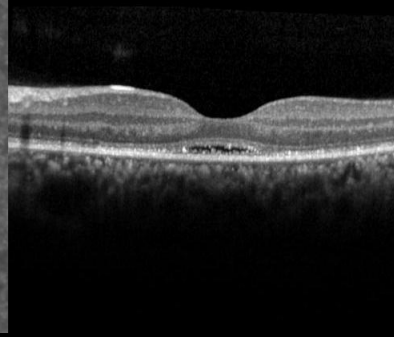


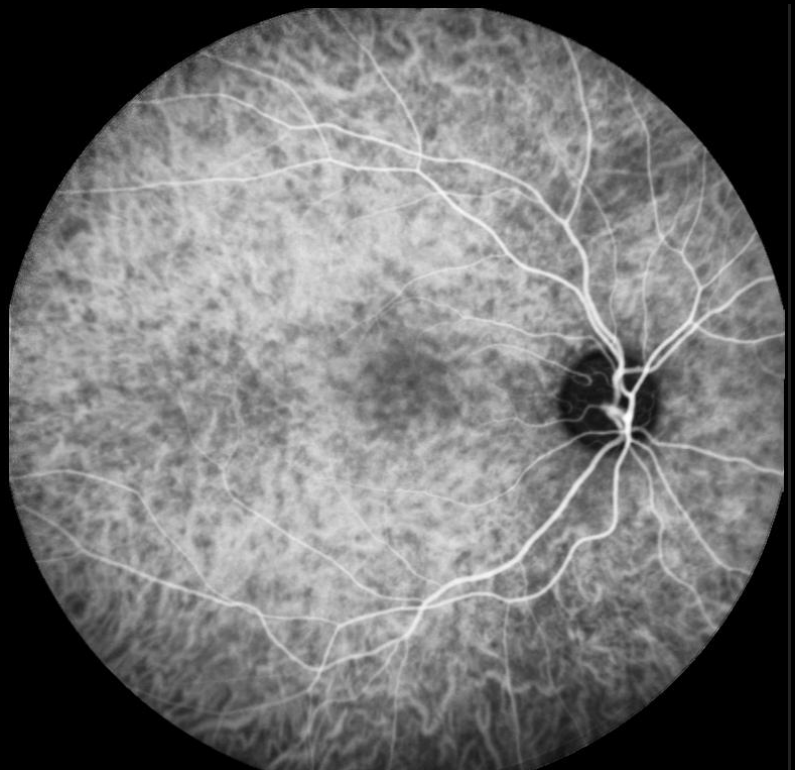
Day 10

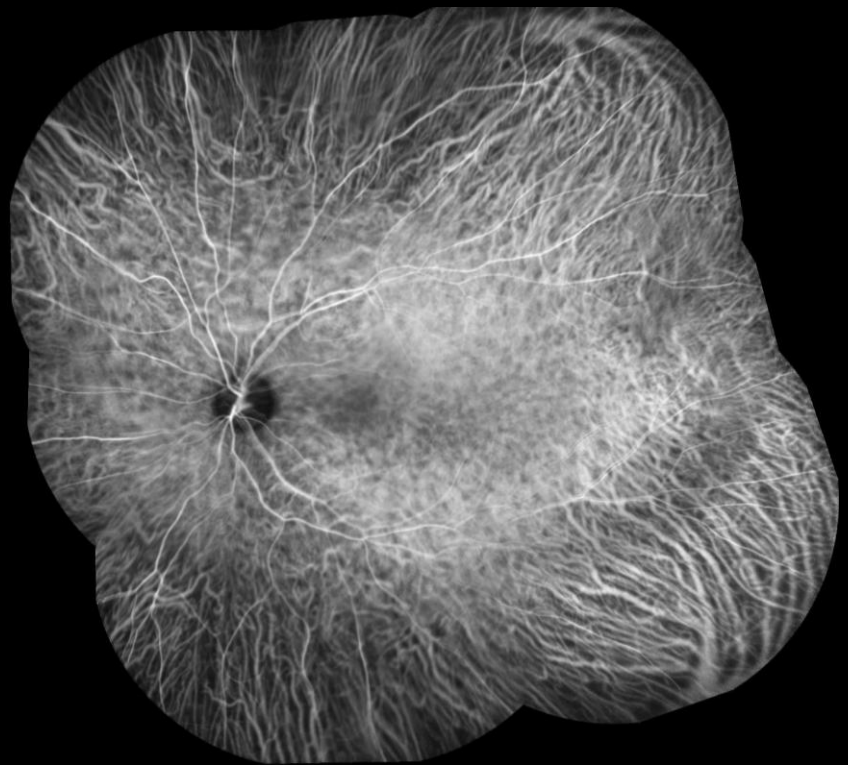




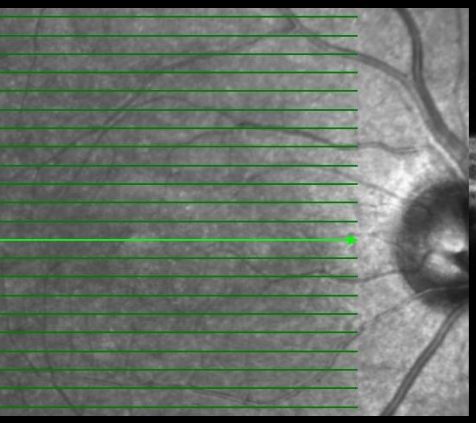
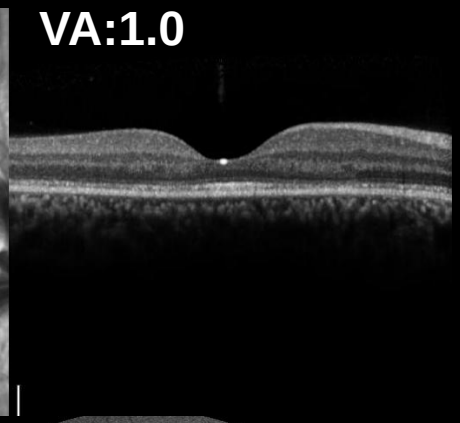
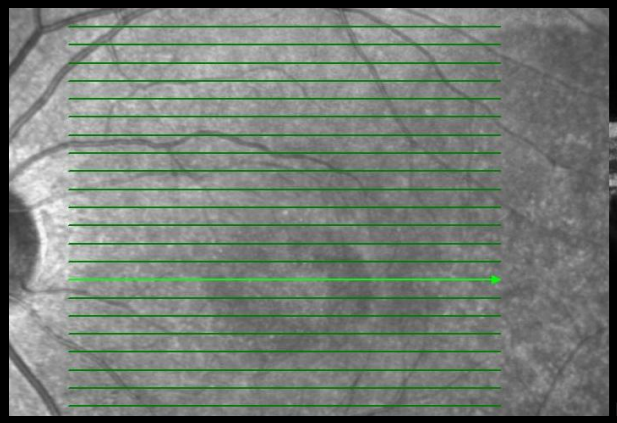
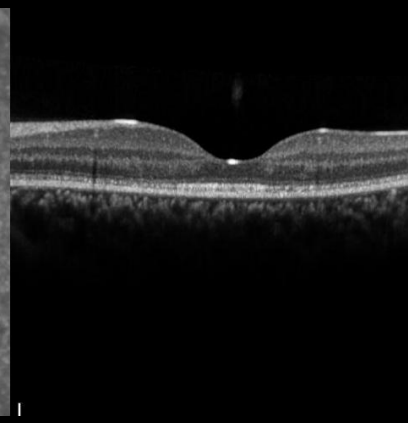
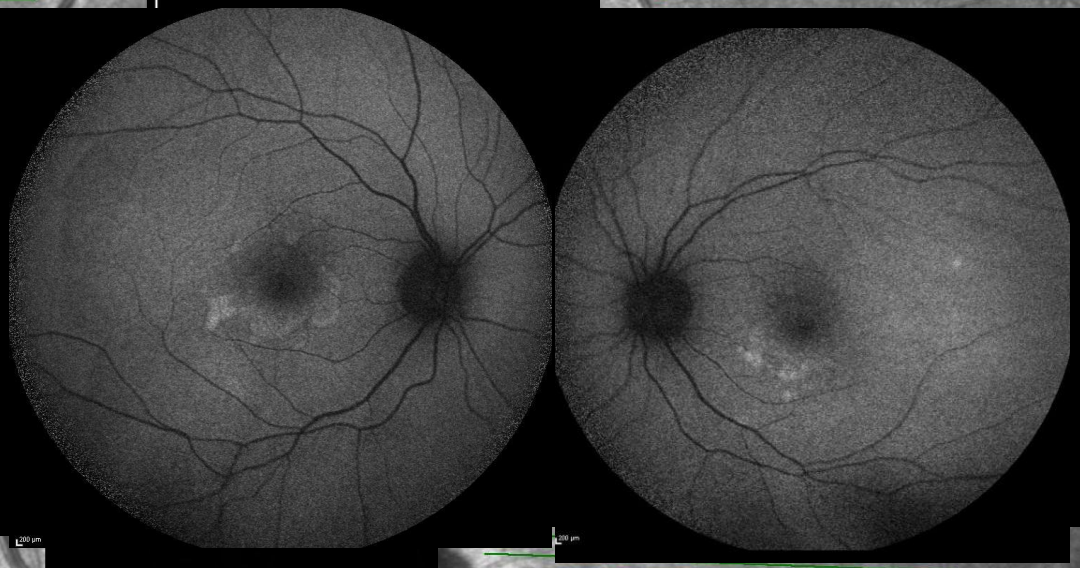
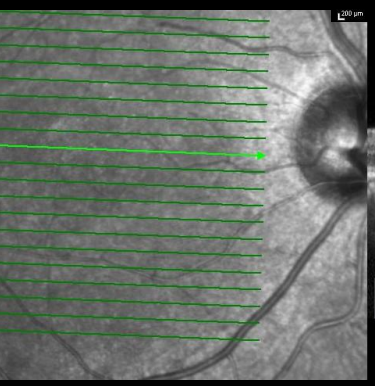
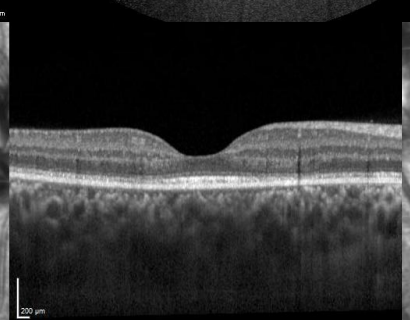
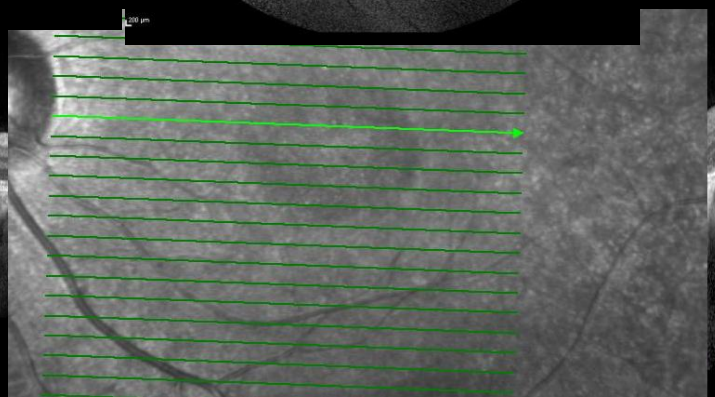
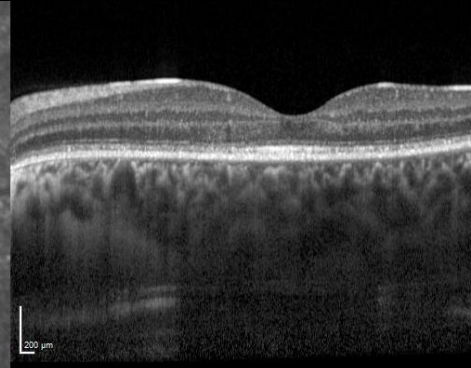




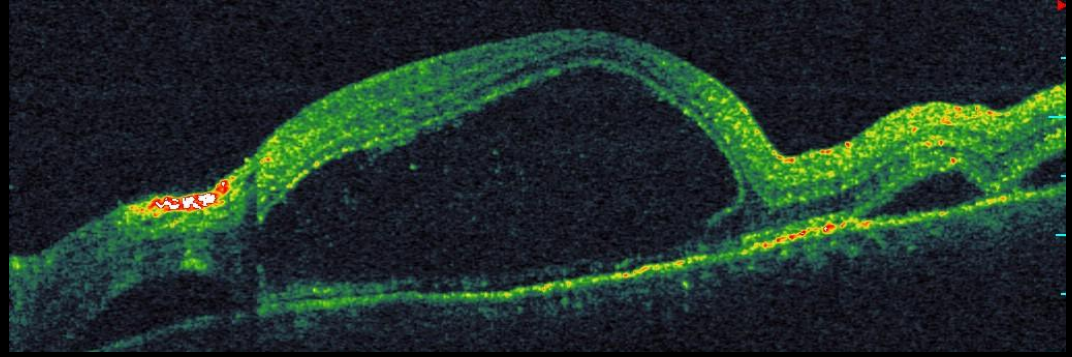


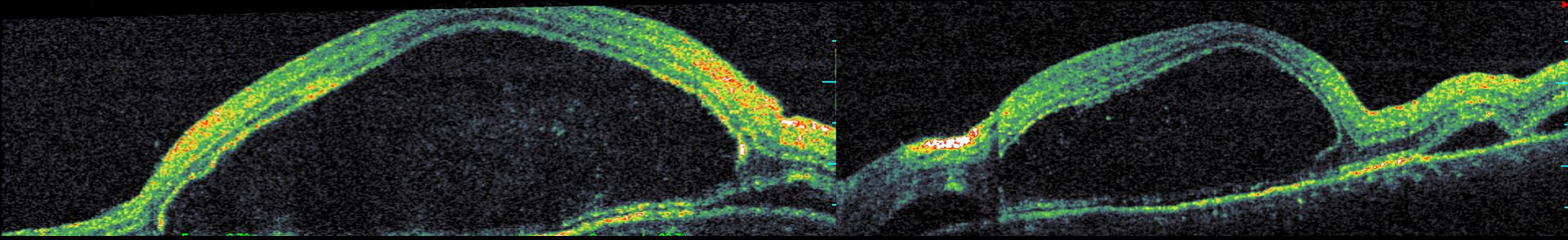


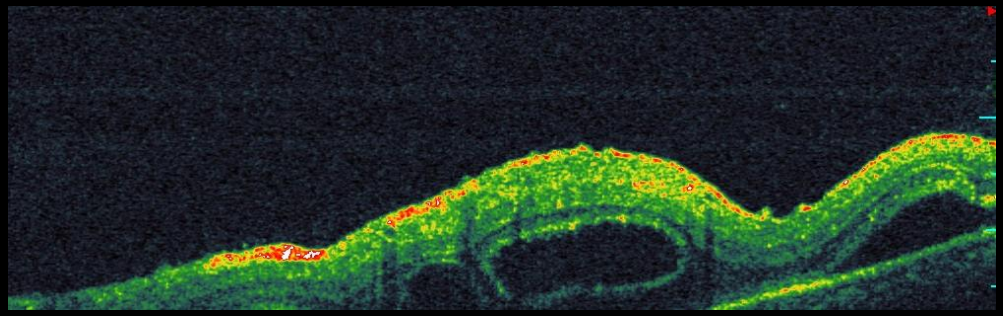
Day 30
VA:1.0

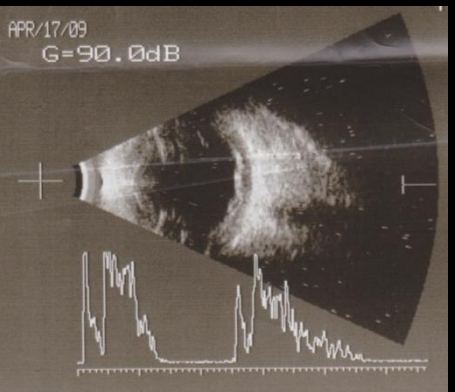










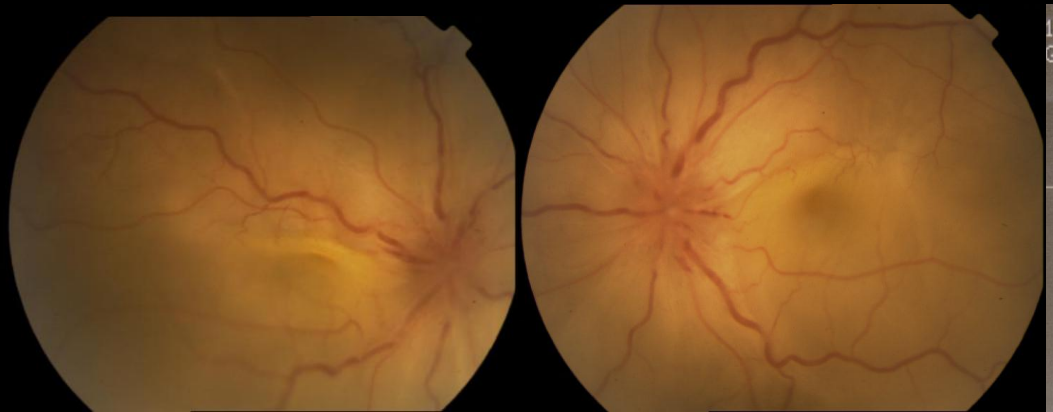
29 y/o F
VA:CF at 1 m,3 m

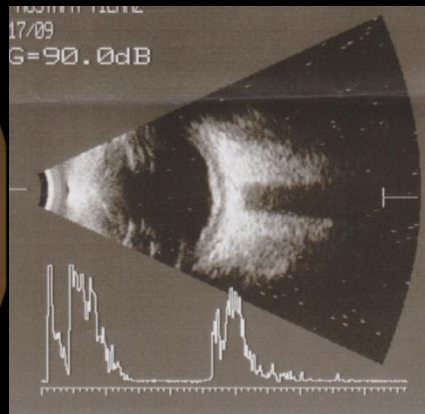


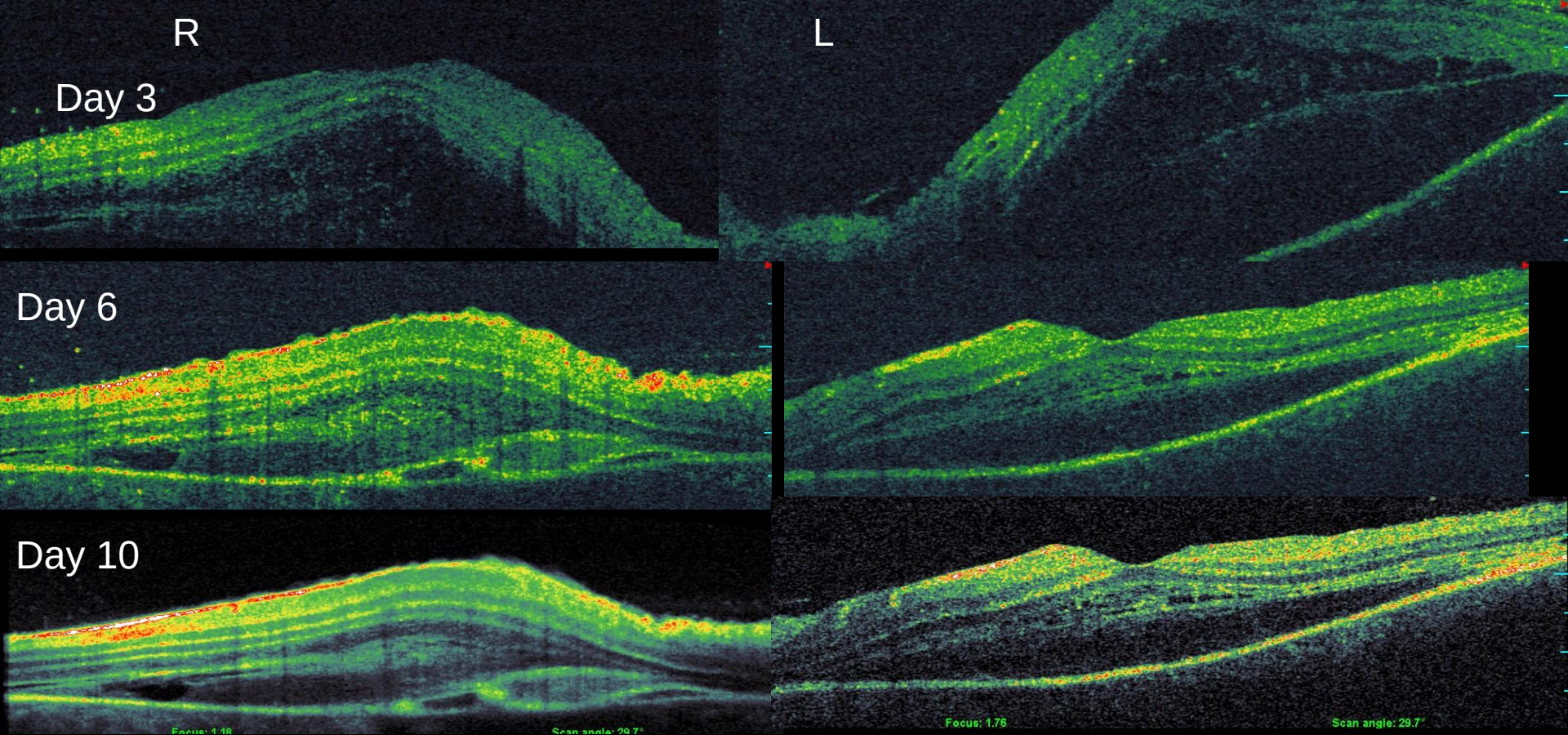




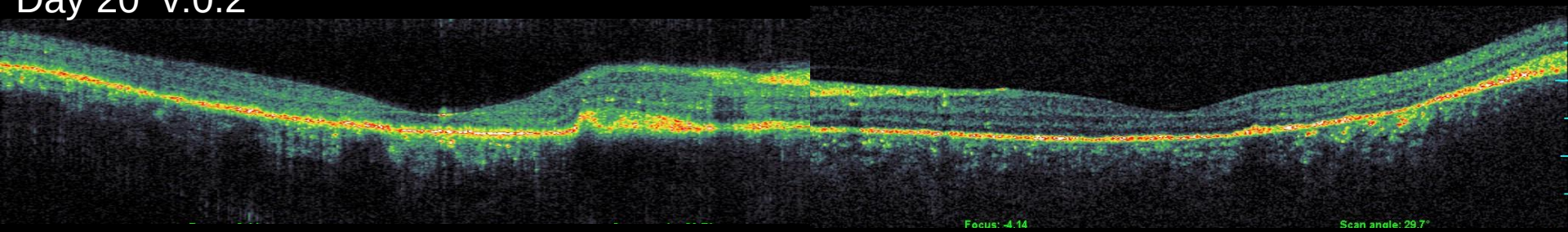




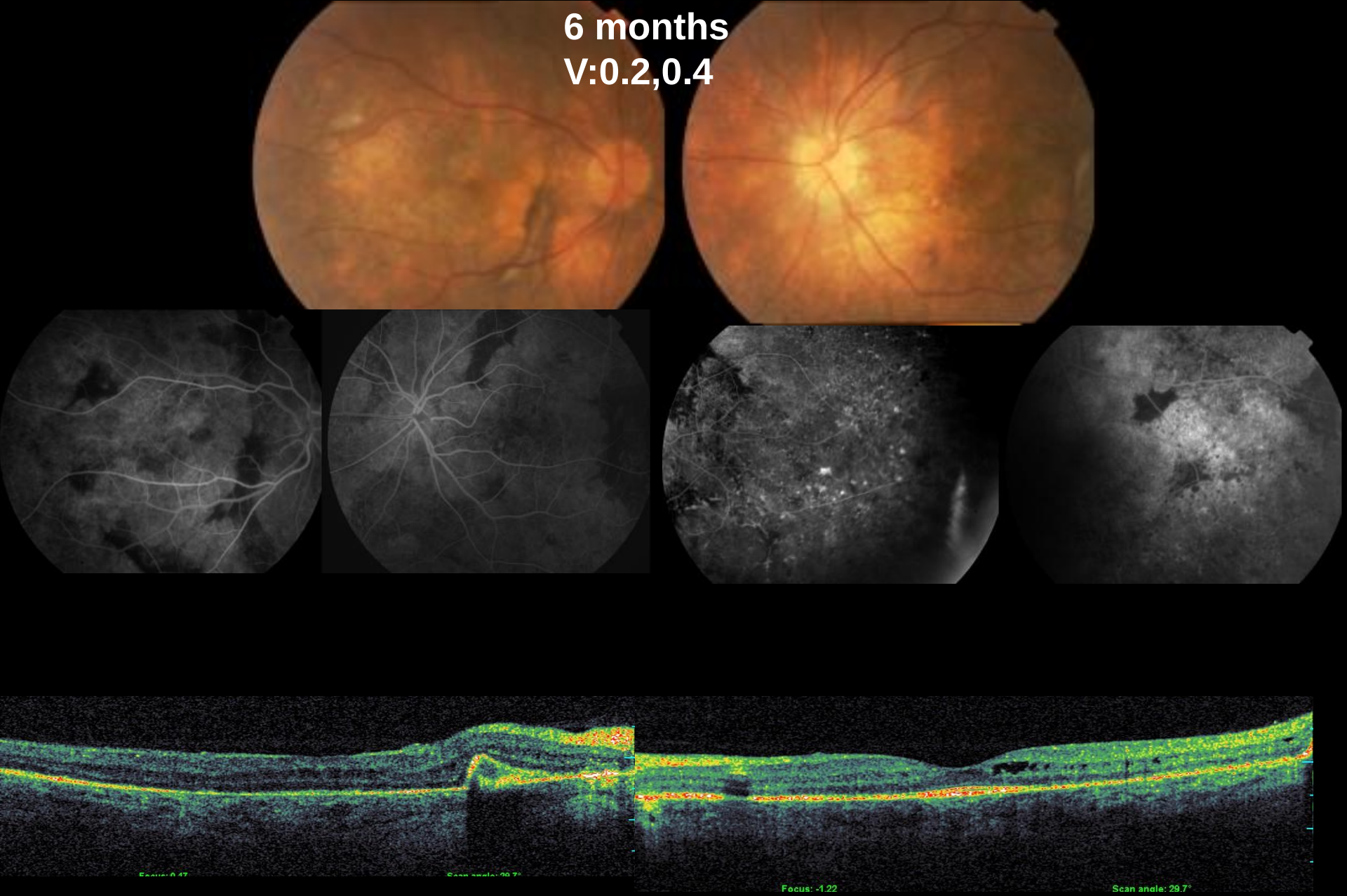



R
L
Day 3
Day 6
Day 10
Focus: 1.76
Scan angle: 29.7°

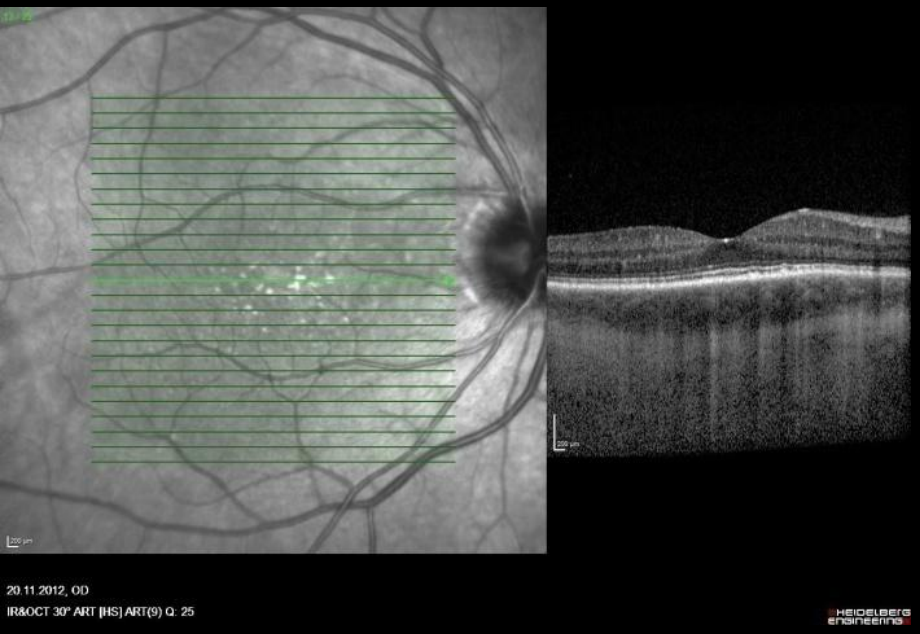
Day 20 v:0.2

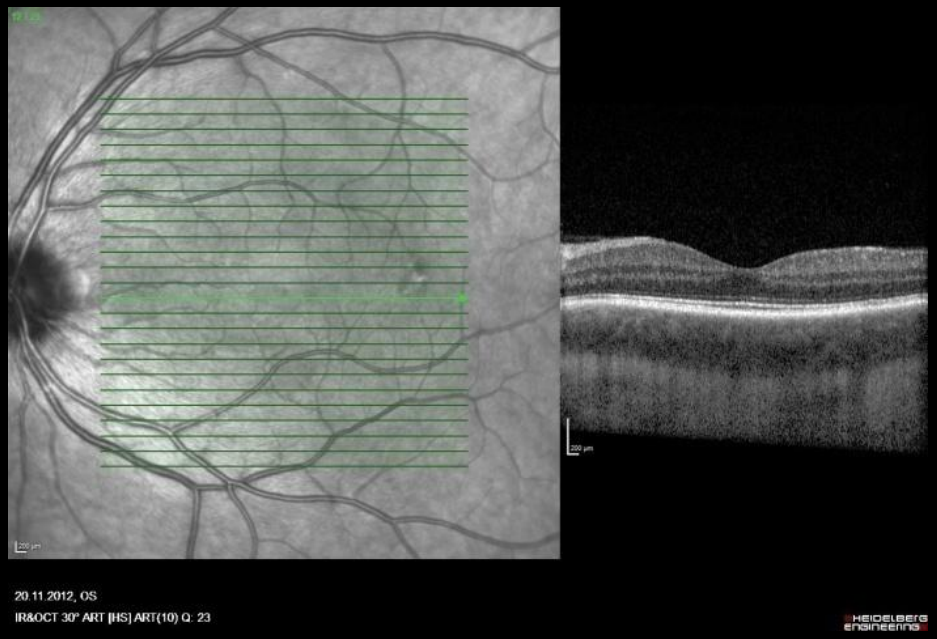

Focus: -4.14
Scan angle: 29.7°

6 months
V:0.2,0.4



EDI





Decrease in choroid thickness in chronic disease

da Silva FT, et al.. Br J Ophthalmol.2012

TREATMENT

- STEROIDS WHEN?HOW LONG?
  - Rapid response (in 2 wks.), severity of SRD ∞ final VA
  - With ST , improvement of SRD in 36±24 days
    Nazari H, Rao NA Br J Ophthalmol.2012 Nov;96(11):1410-4.
  - Early withdrawal of ST causes recurrence
  - Min. 6 months treatment, slow tapering

- IMMUNSUPRESSIVES WHEN? HOW LONG?
  - With STs , in maintanence treatment; in cases with slow response to STs as primary treatment
  - In recurrent phase, in ch. anterior uveitis
  - Azo, CsA,MMF,biologic agents
    Abu El-Asrar AM, et al. Acta Ophthalmol. 2012 Sep 12. .1755-3768.

- LOCAL TREATMENT?**IVB,IVTA?? SUBTENON ST? RETISERT?**
  - **Systemic ST+IVB, increases resorbtion of fluid in SRD**
  - **Retisert can be helpful**
    - Yousuf Khalifa, et al. . Ocular Immunology & Inflammation, 17(6), 431–433, 2009

PROGNOSIS

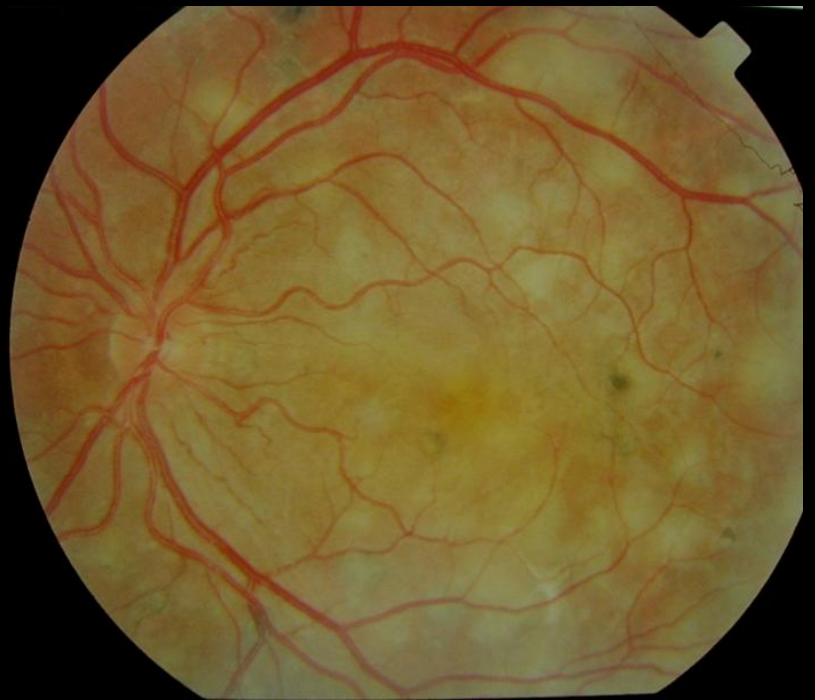
Good prognosis:

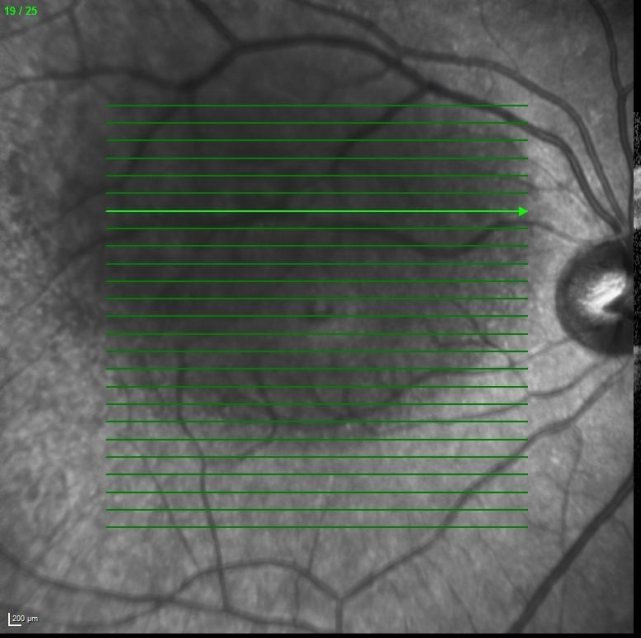
- absence of extraocular findings
- absence of synechia
- duration of ST treatment at least 6 months
- slow tapering of STs
- good VA at baseline
- absence of complications

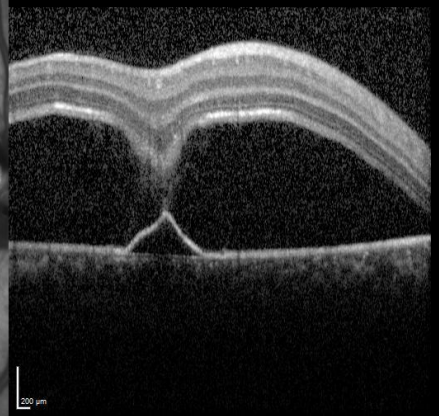
Al-Kharashi AS, et al . Prognostic factors in Vogt-Koyanagi-Harada. Int Ophthalmol 2007 Apr-Jun;27(2-3):201-10.

DIFFERENTIAL DIAGNOSIS

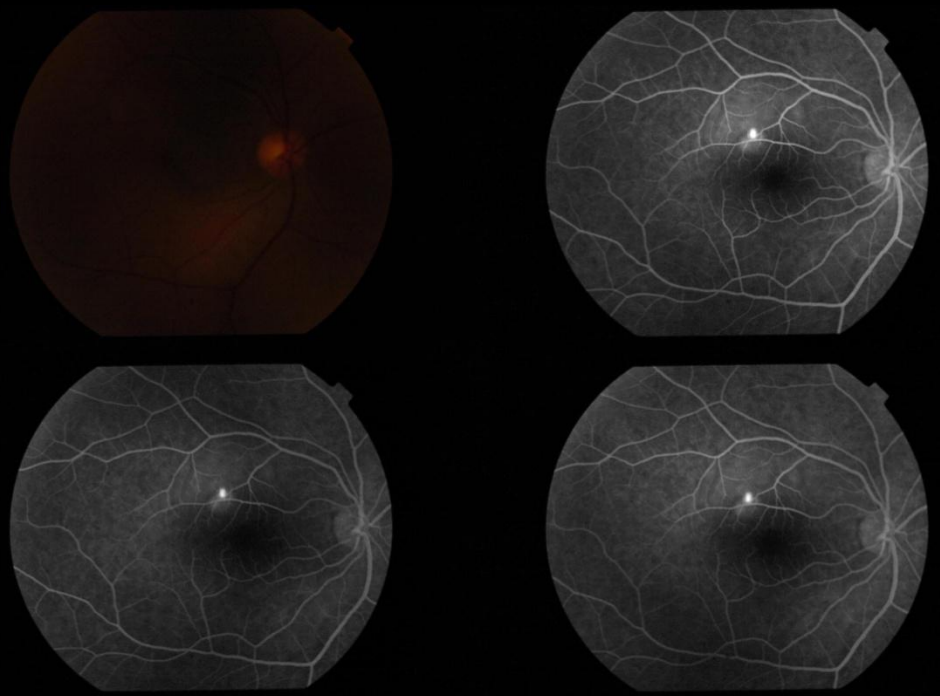
- CSCR
- SO
- Papil oedema
- Sarcoidosis
- Primary intraocular B-cell lymphoma,
- Posterior scleritis
- Uveal effusion syndrome

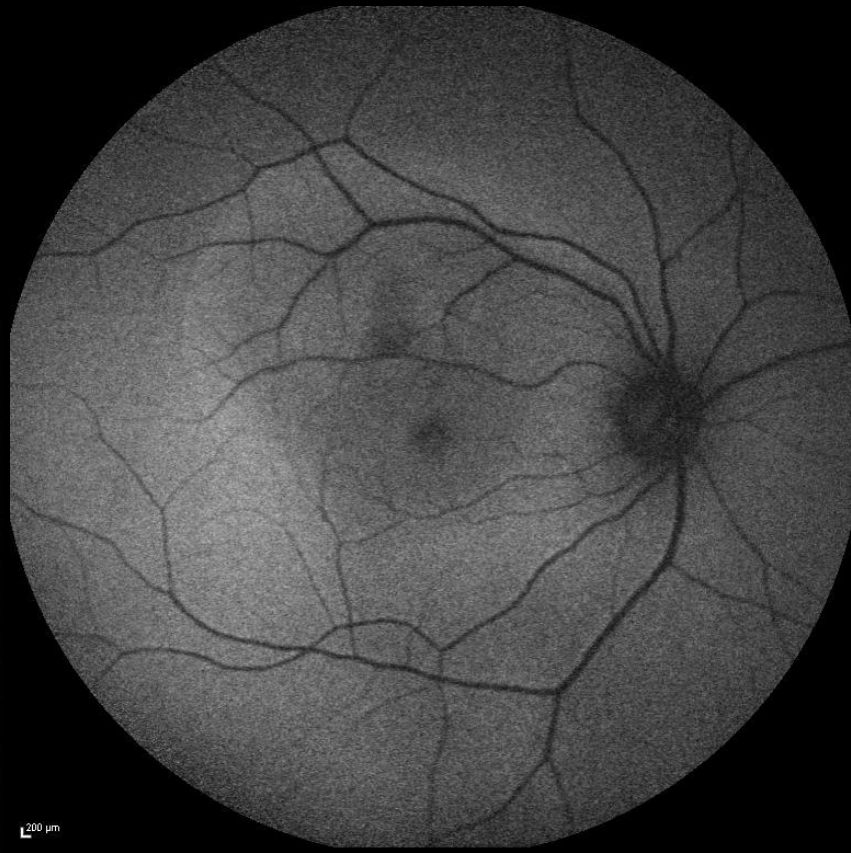




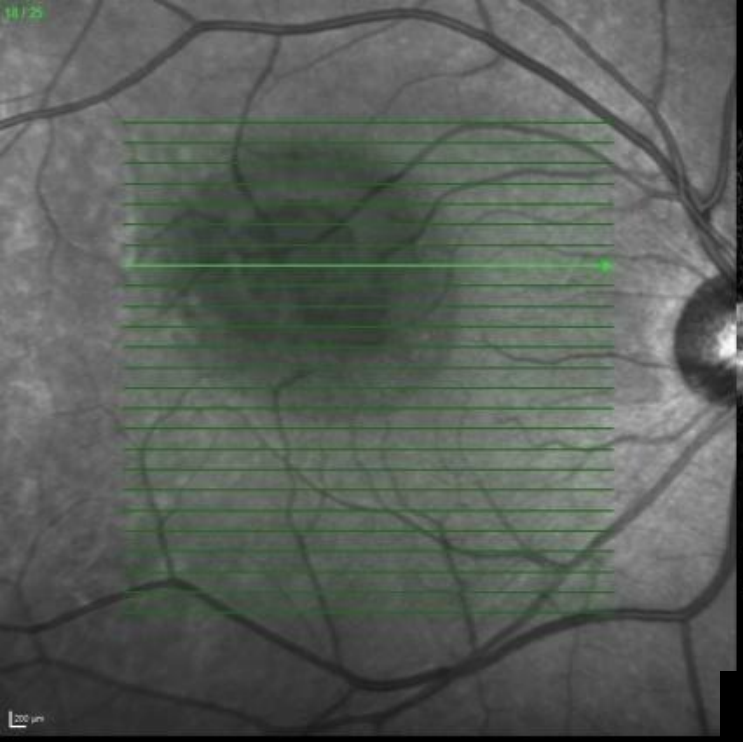


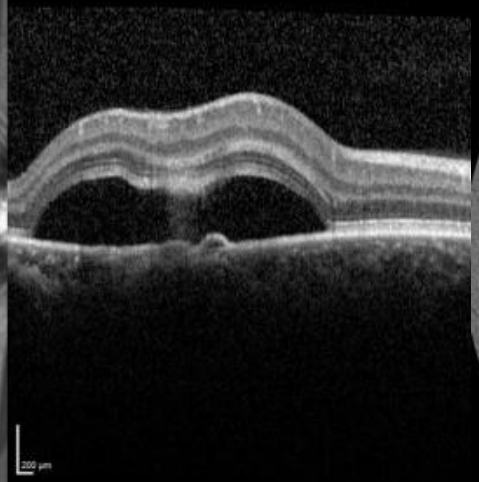
19.12.2012, OD
IR&OCT 30° ART [HS] ART(11) Q: 20
HEIDELBERG ENGINEERING

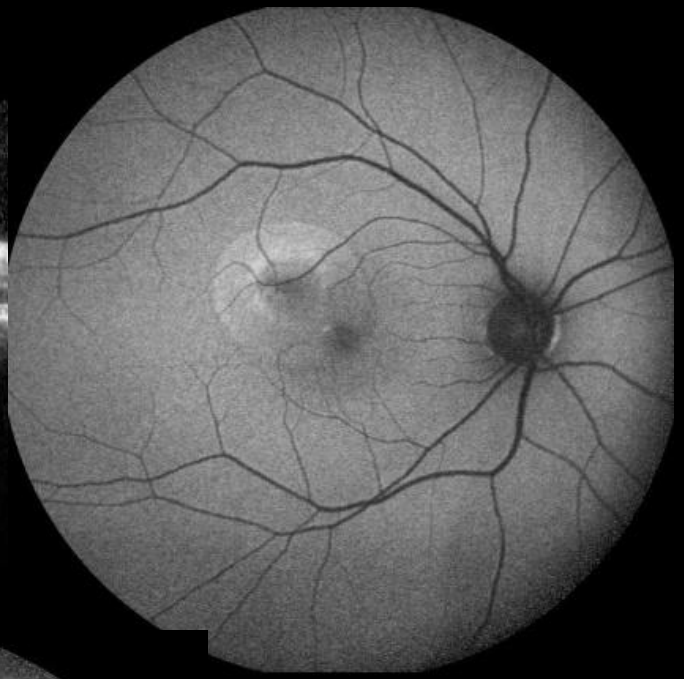




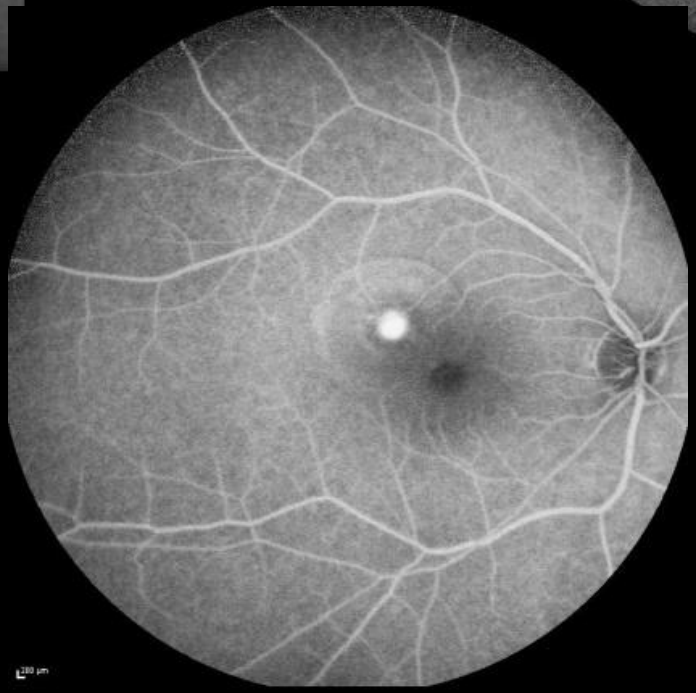
19.12.2012, OD
AF 55° ART(19)
HEIDELBERG ENGINEERING



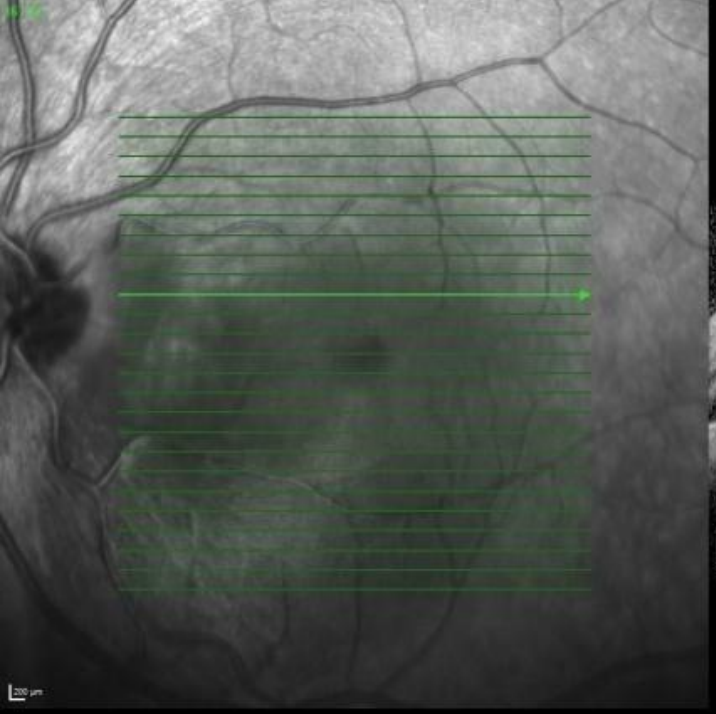


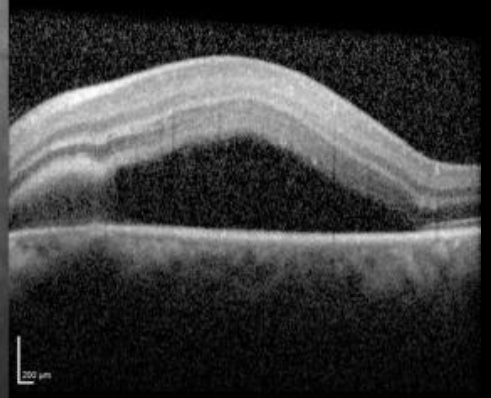


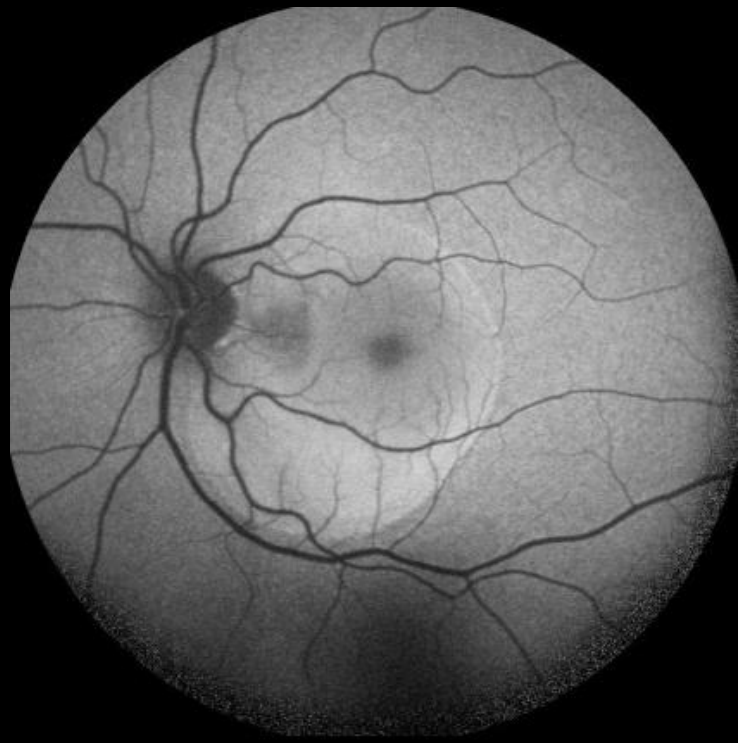
06.12.2012, OD
IR&OCT 30° [HS] ART(10) Q: 26



06.12.2012, OD
FA 4:36.22 55° ART(13)

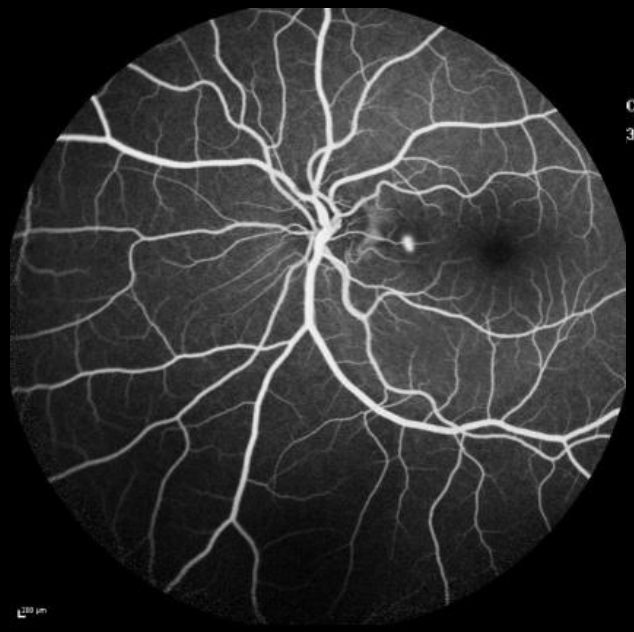




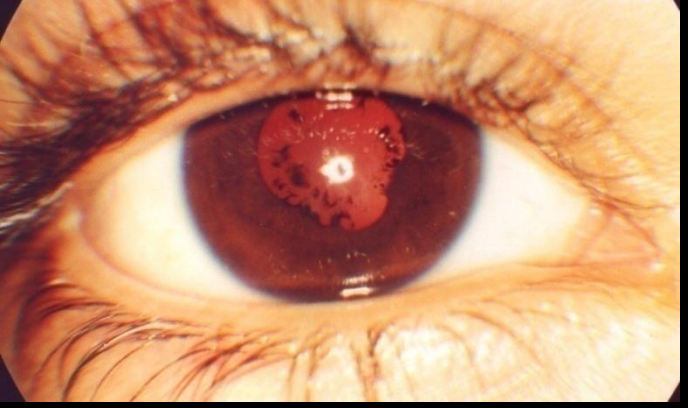


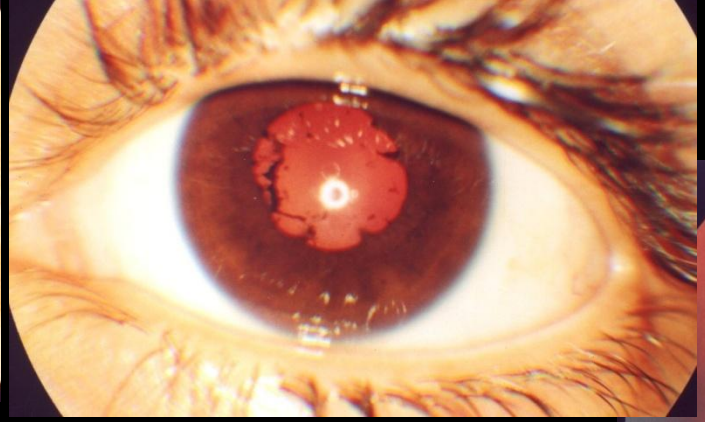
09.08.2012, OS
IR&OCT 30° ART [HS] ART(9) Q: 20

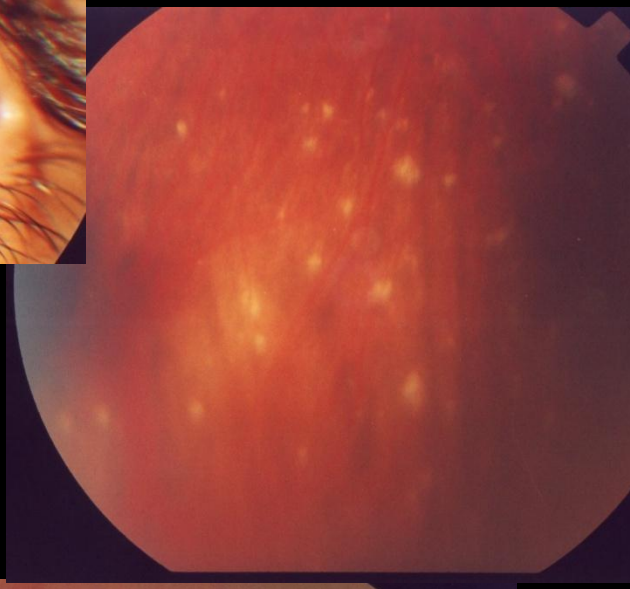
OS
39)



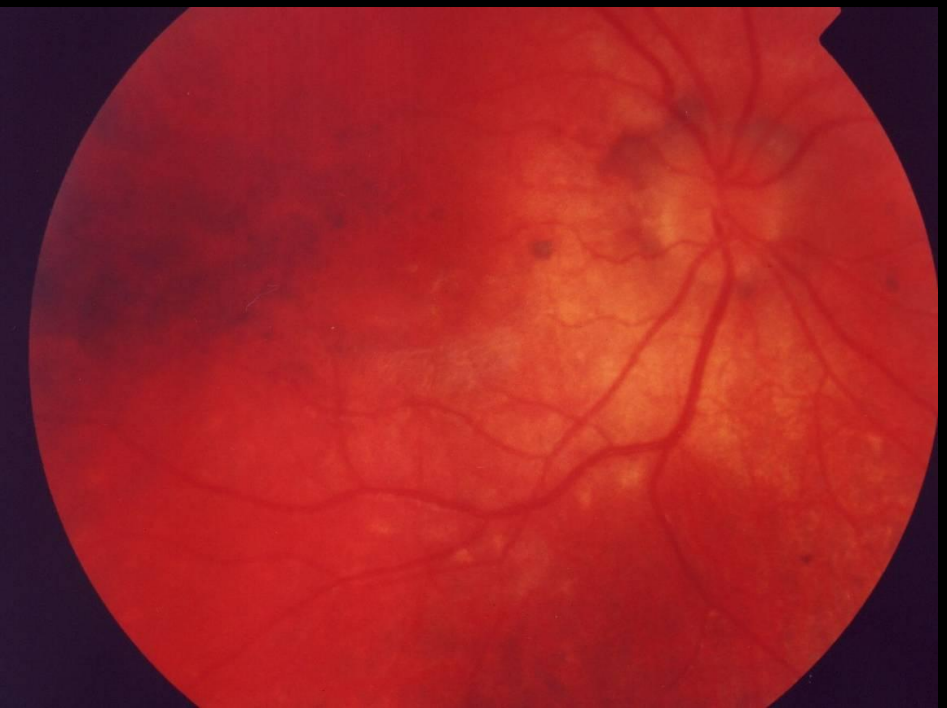
09.08.2012, OS
FA 1:17.08 55° ART(14)

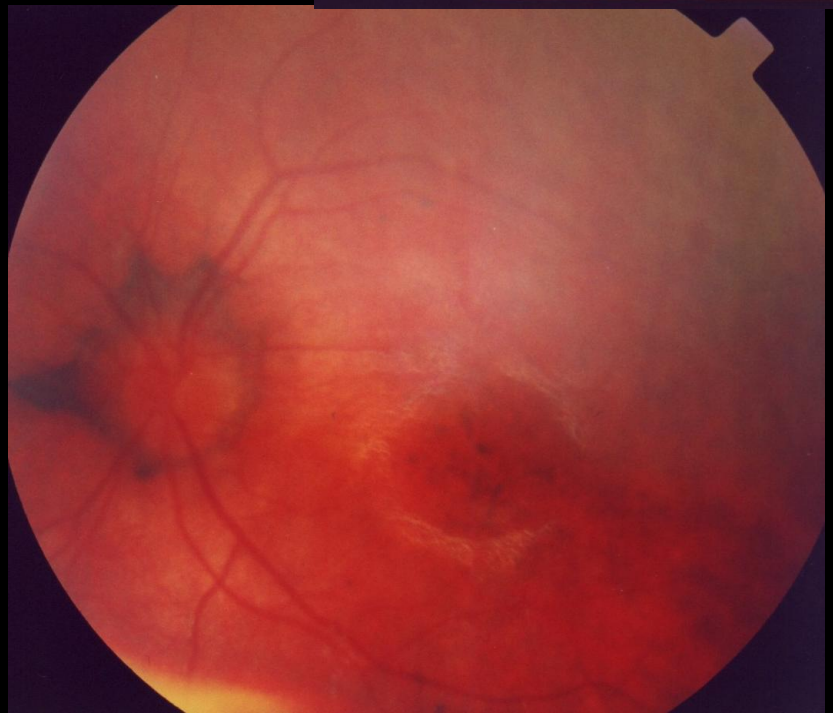


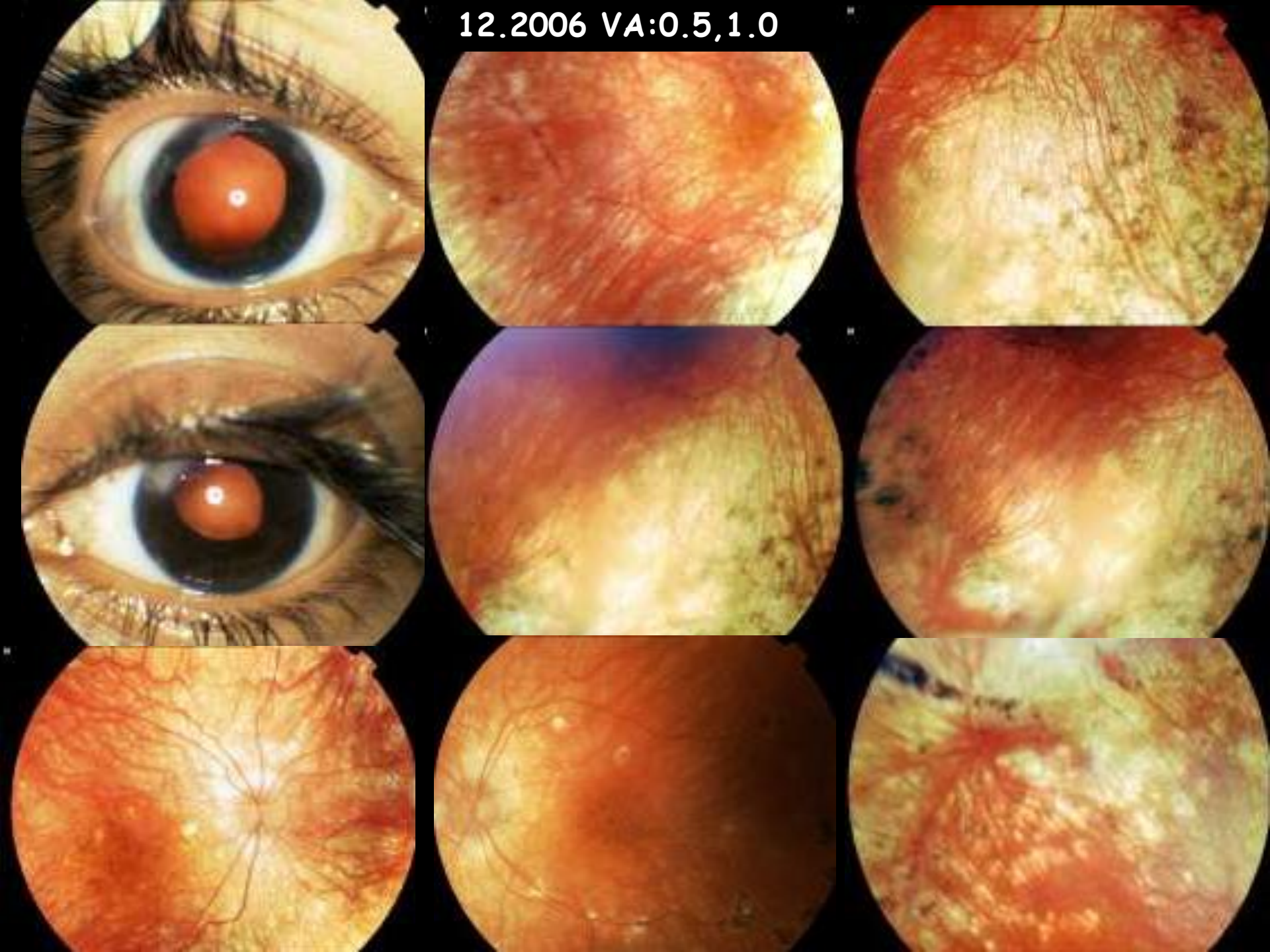


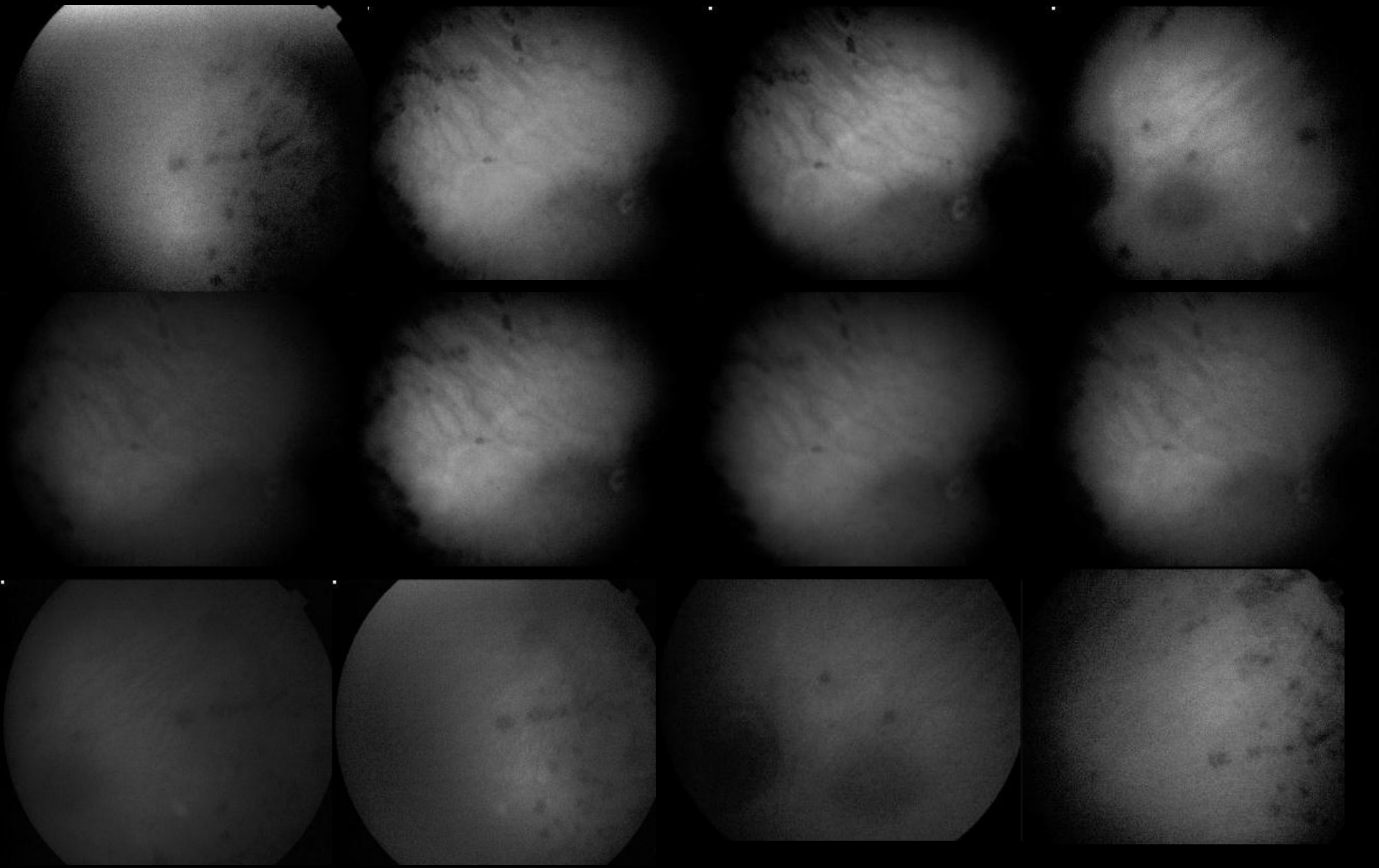


7 y/o F
2001

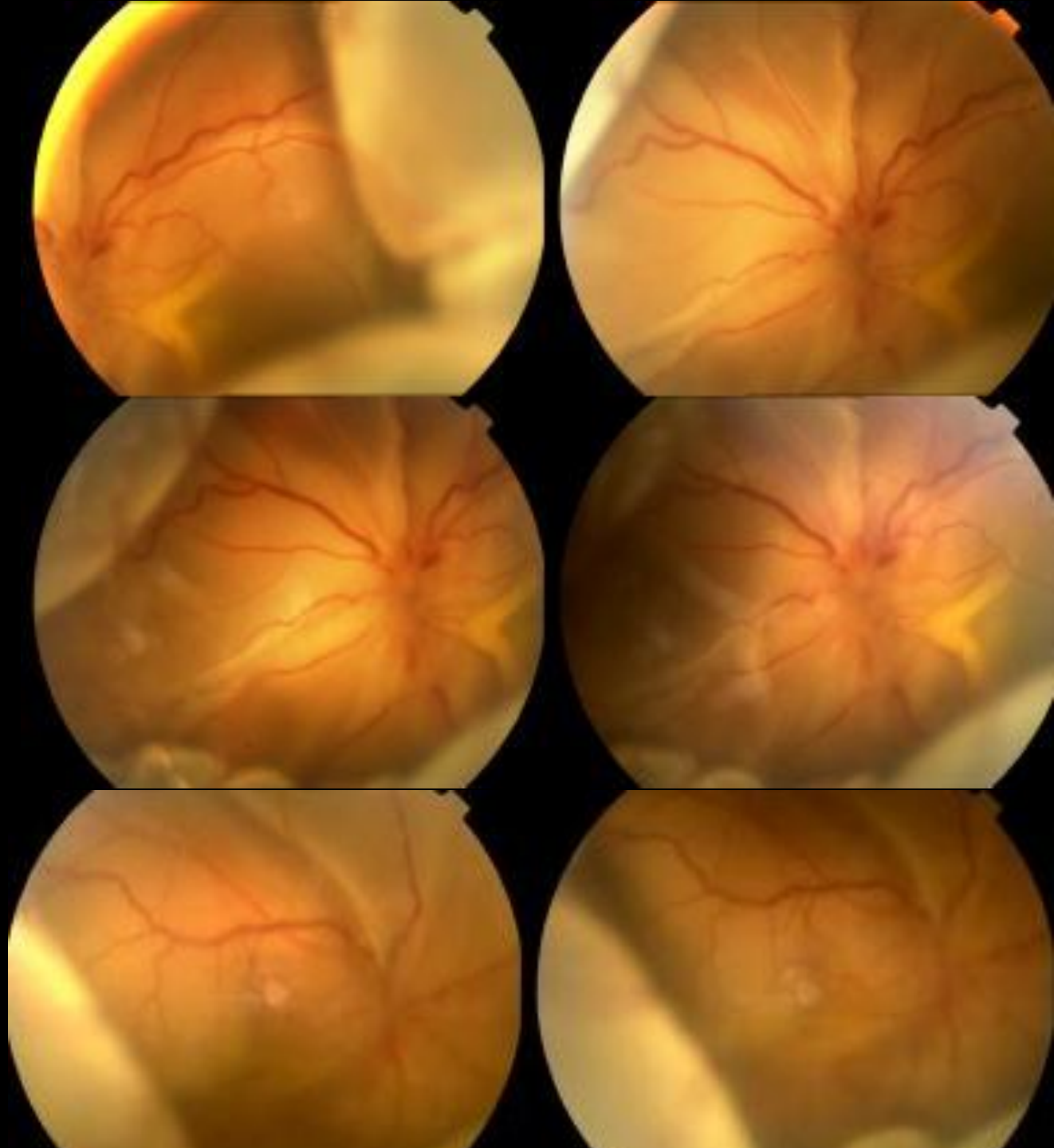


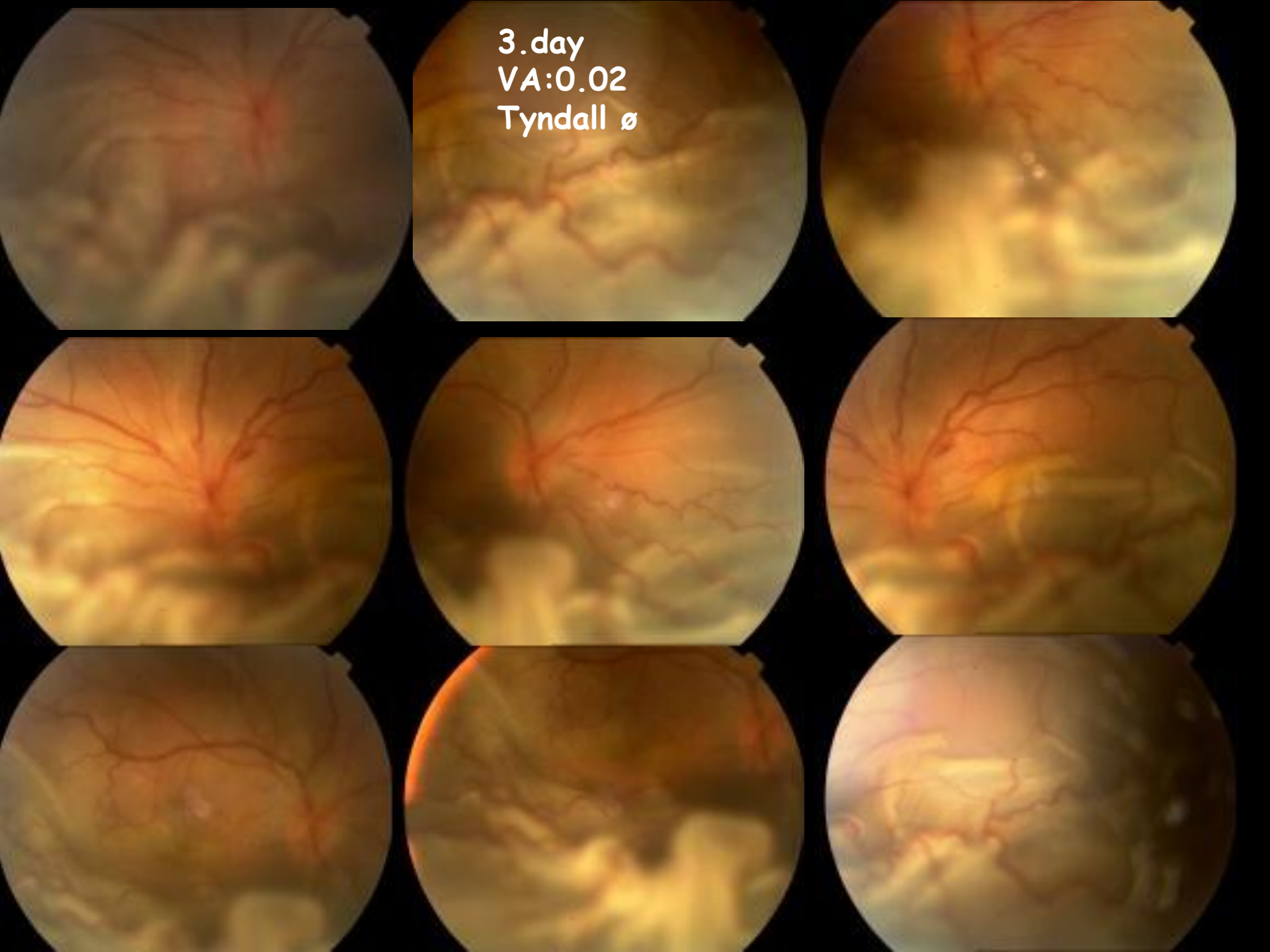


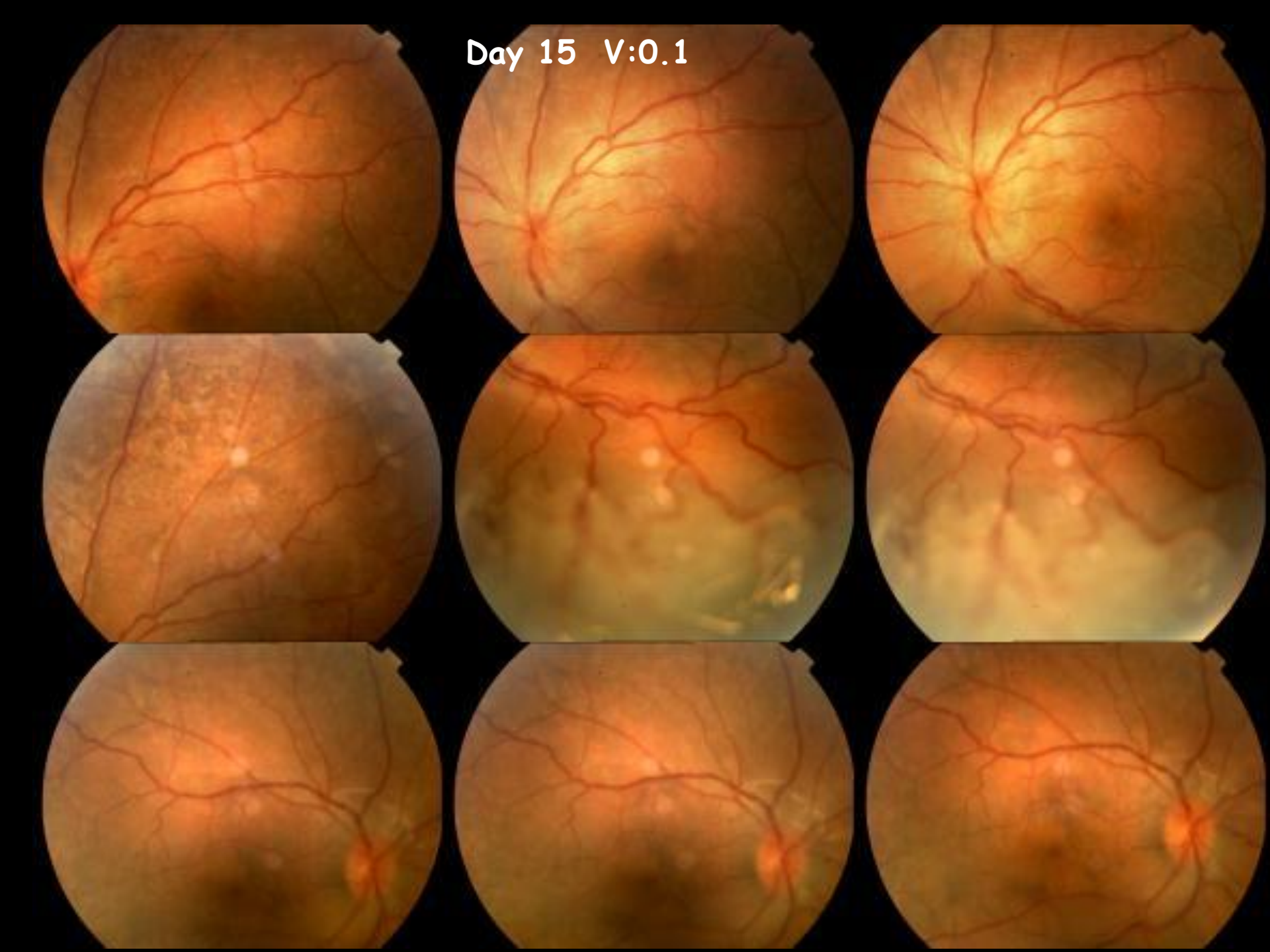

12.2006 VA:0.5,1.0

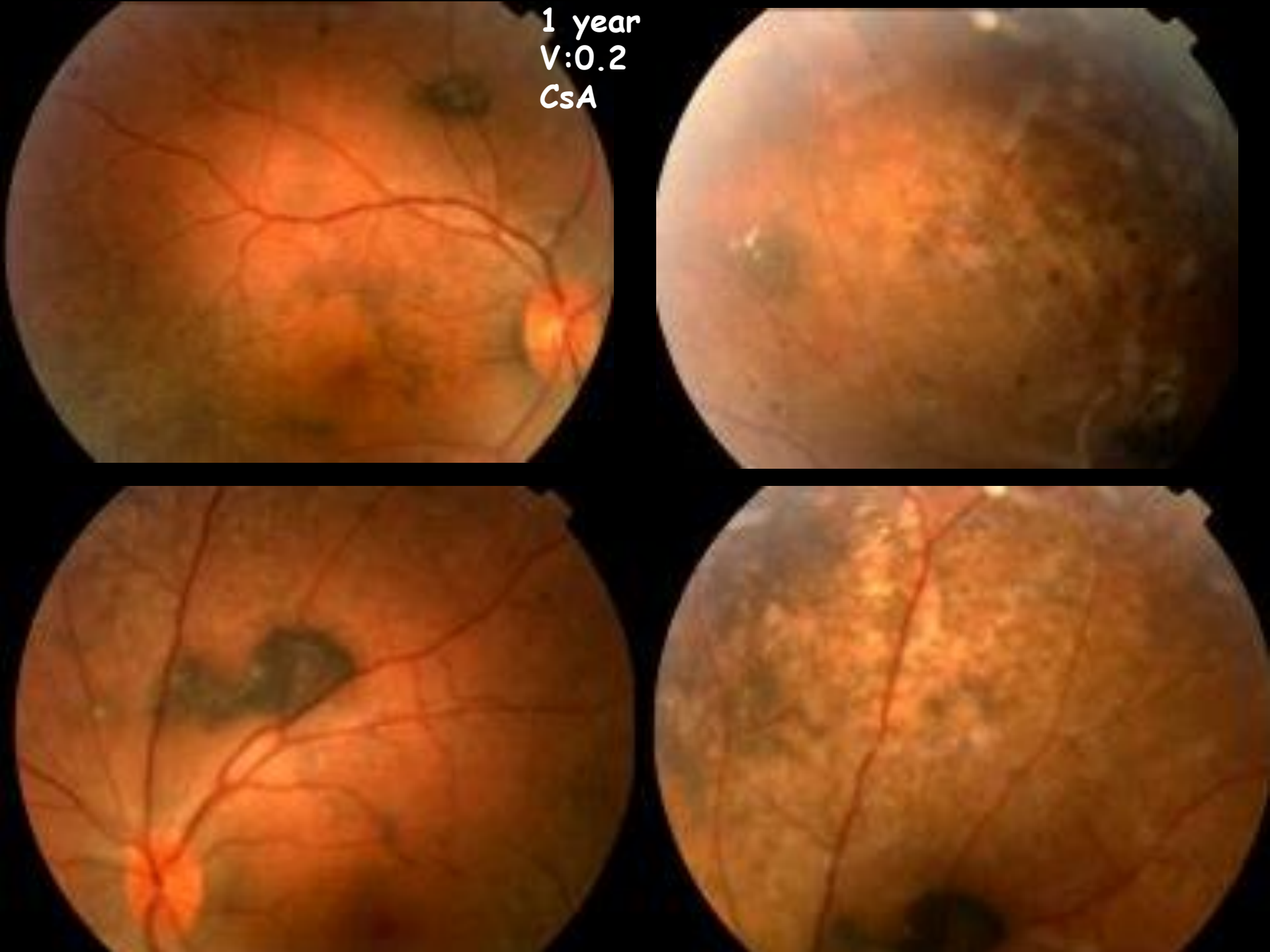


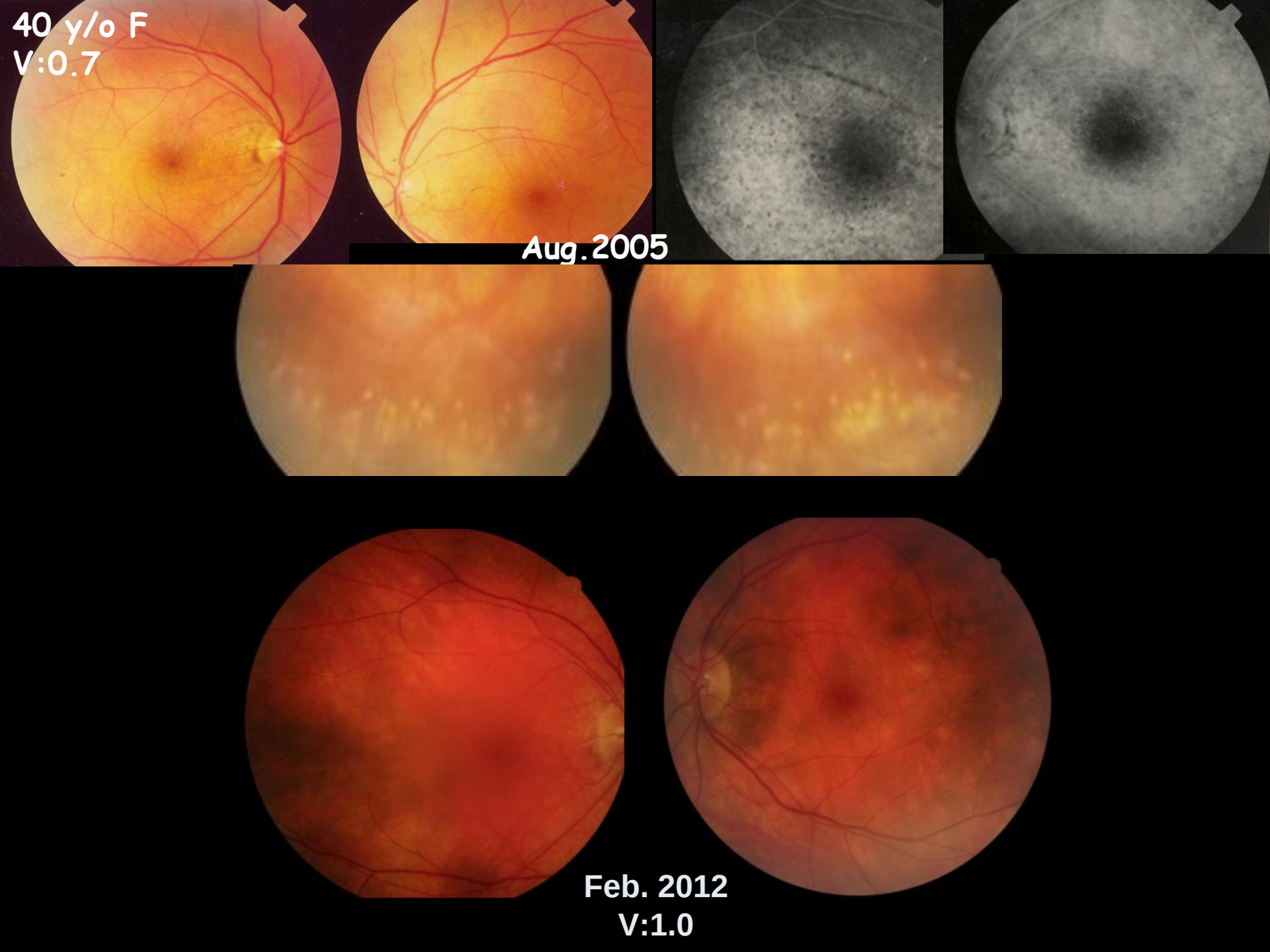
14 y/o F
Headache,
VA:CF
+4tyndall
ASO↑↑↑

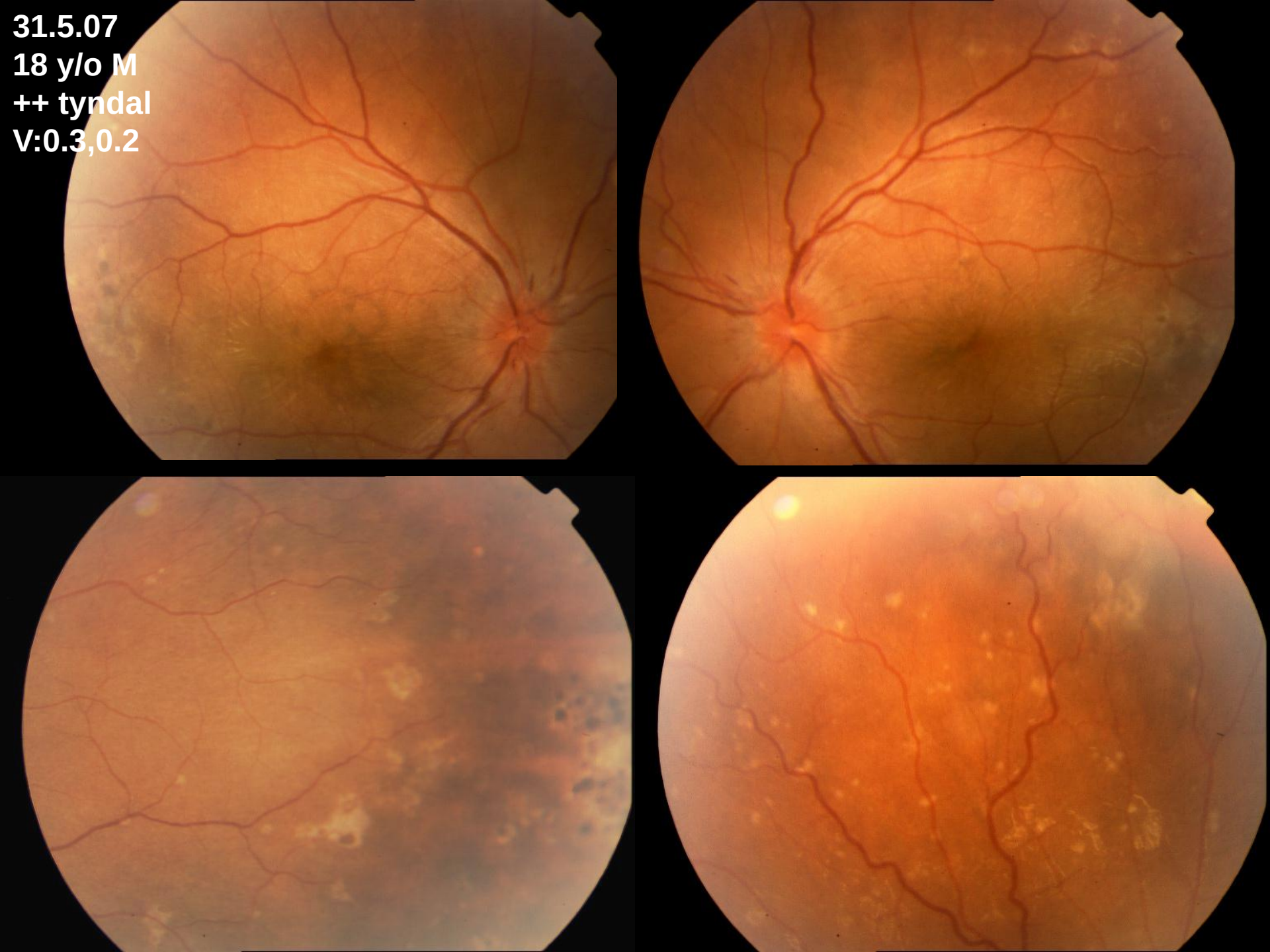


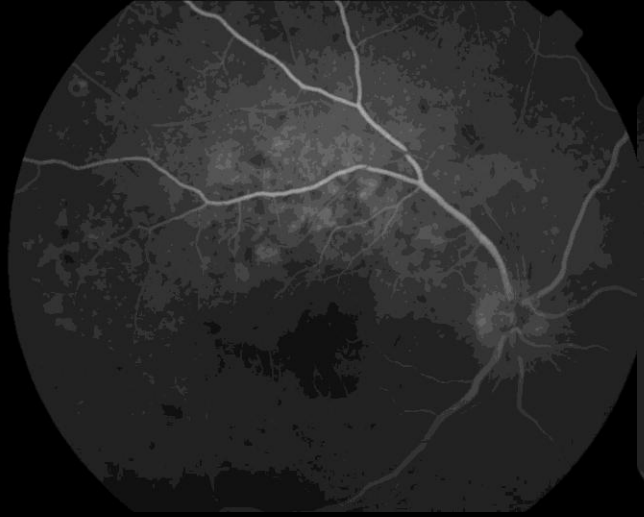
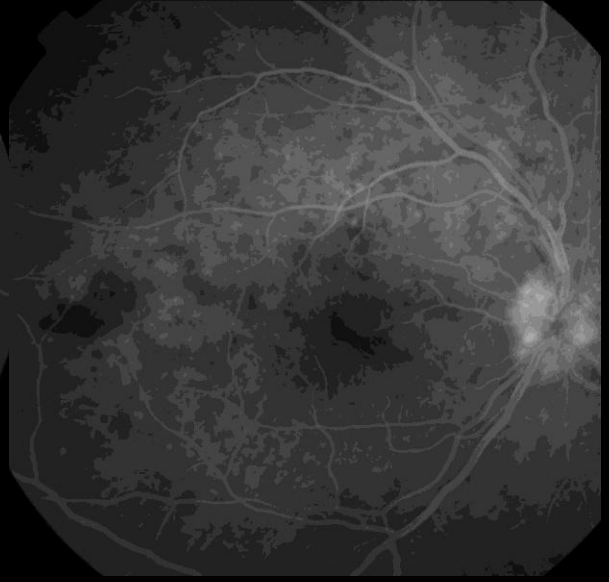
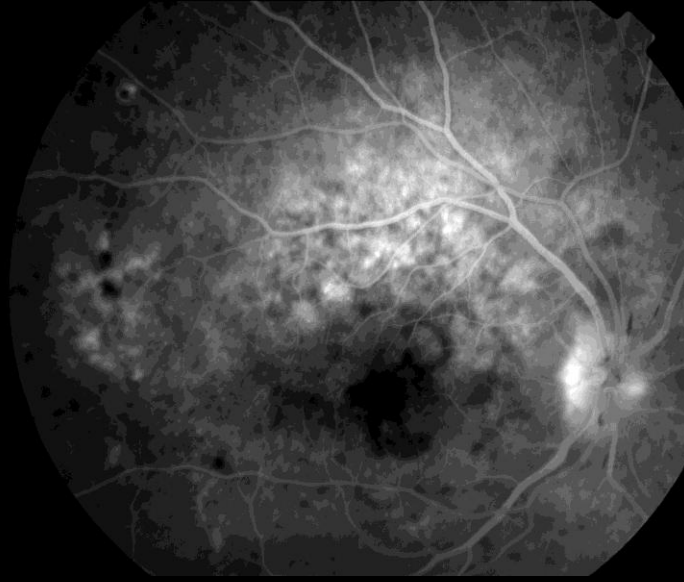
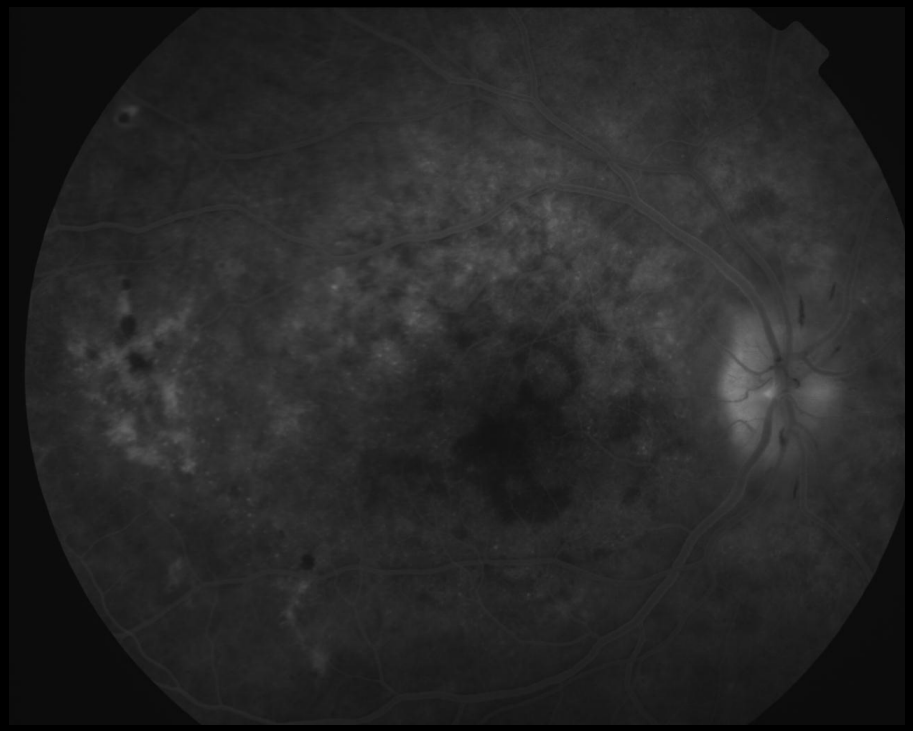
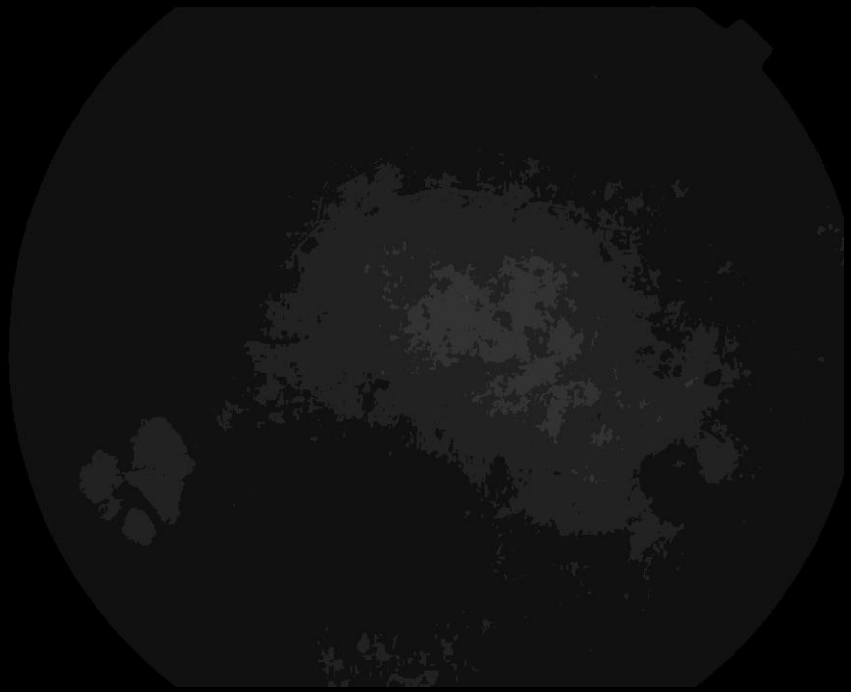

3.day
VA:0.02
Tyndall ø

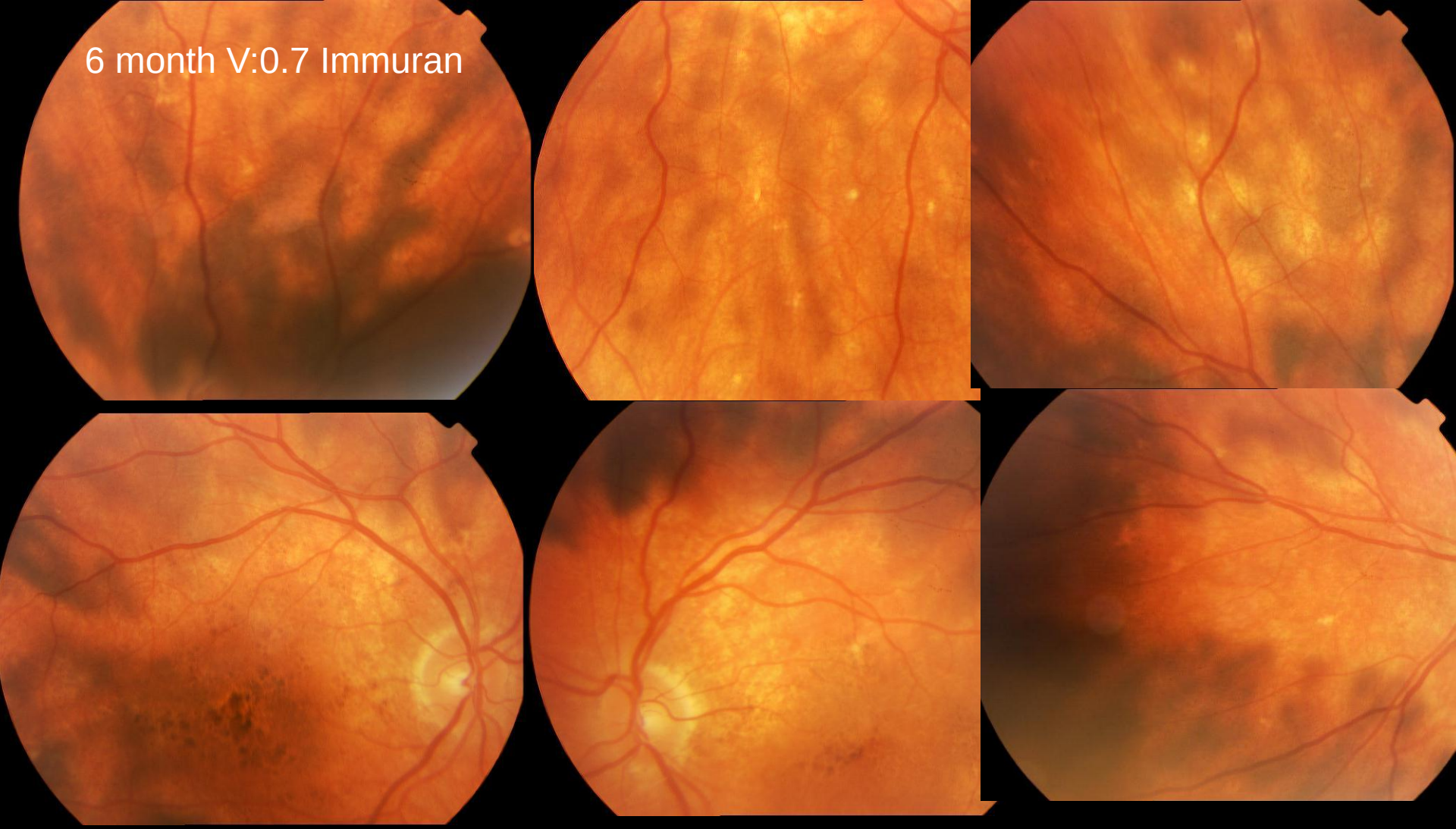

Day 15 V:0.1


1 year
V:0.2
CsA

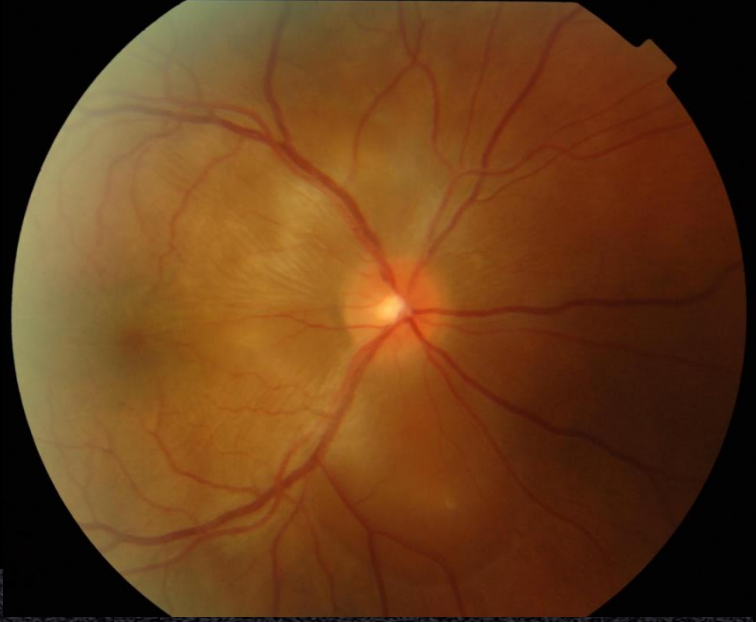

40 y/o F
V:0.7
Aug.2005
Feb. 2012
V:1.0

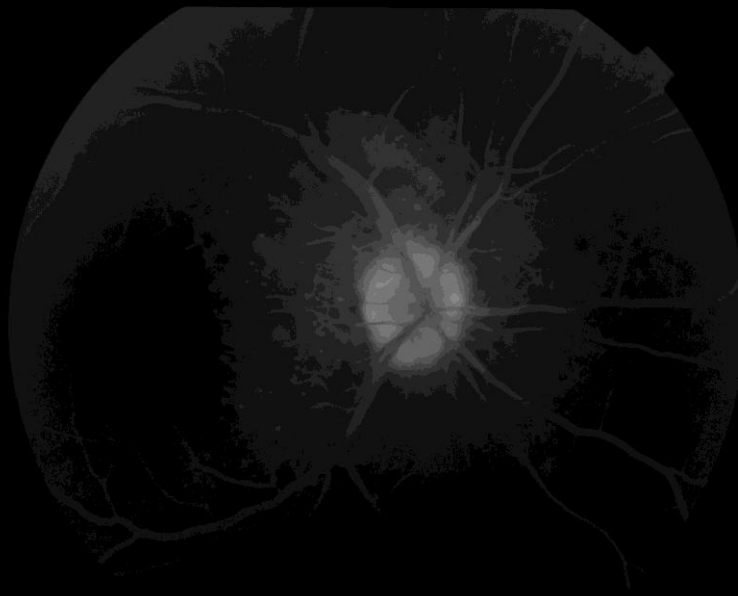

31.5.07
18 y/o M
++ tyndal
V:0.3,0.2

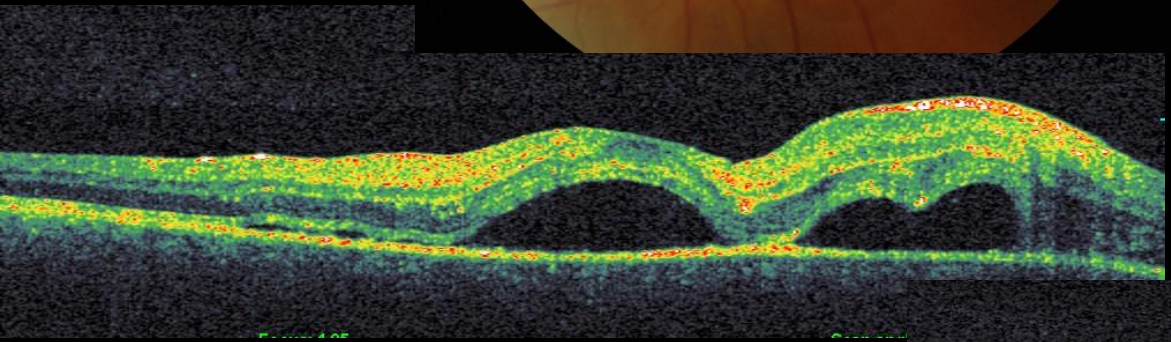






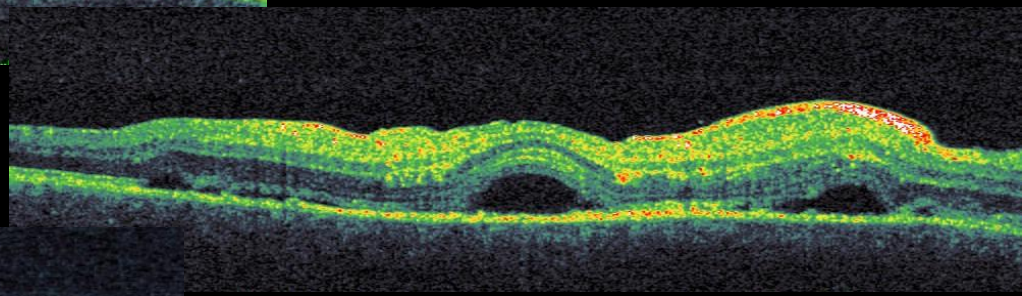

6 month V:0.7 Immuran

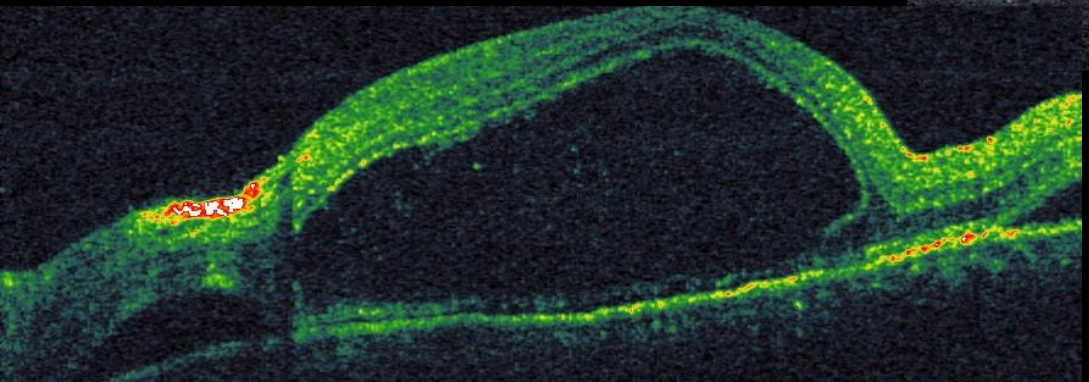
24 y/o,F
june 2007



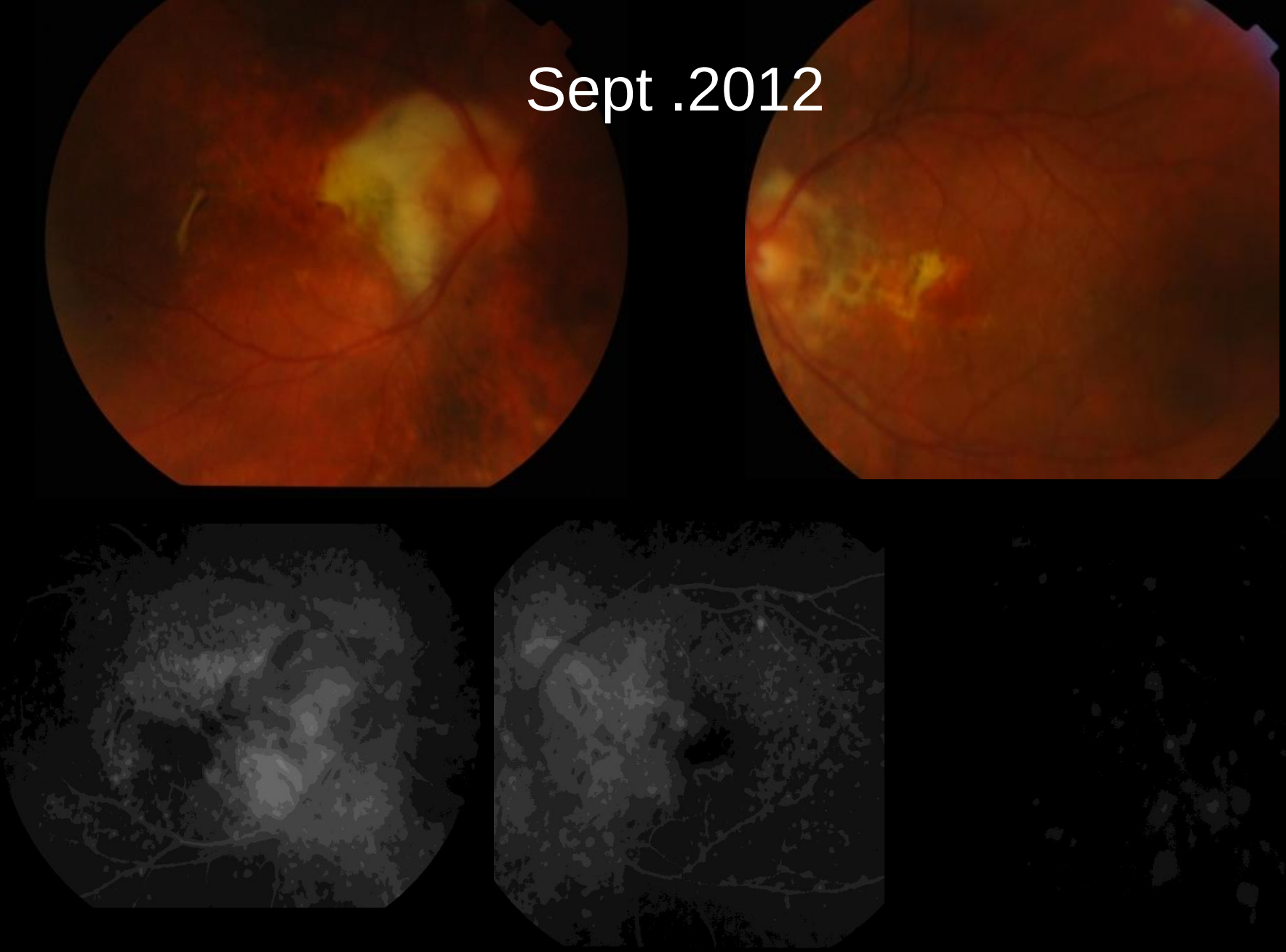








Sept .2012

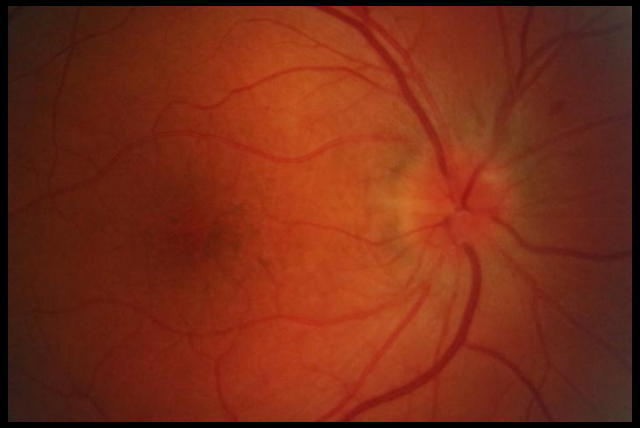


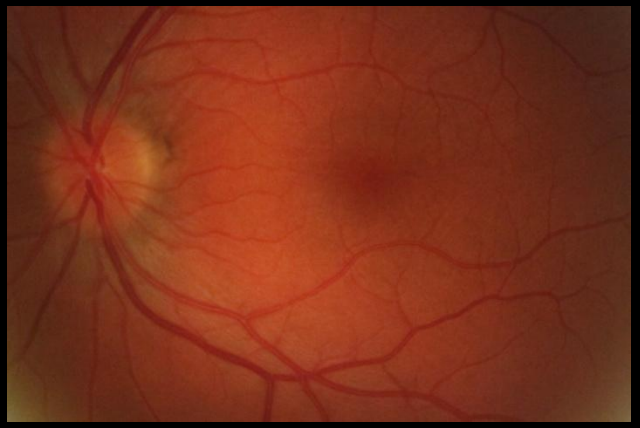
CONCLUSION

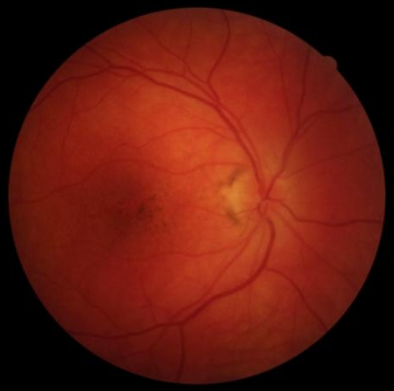
- First symptom-finding is usually headache & papil oedema
- Exudative detachment is not seen in all cases
- Poliosis & vitiligo is seen in late phase
- Panuveitis is frequently seen in recurrent phase
- ICG, OCT, FFA
- With early diagnosis & good treatment visual prognosis is favorable

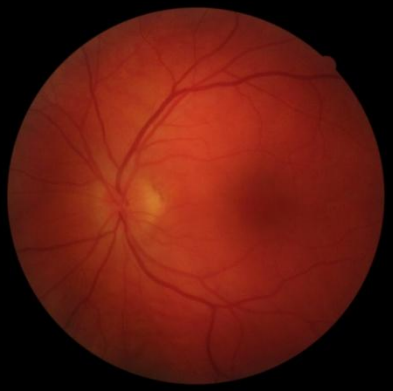
Ann Ophthalmol. 1990 Feb;22(2):59-62. **VKH and pregnancy.**Steahly LP.
Two black women had bilateral anterior and posterior uveitis, nonrhegmatogenous rd, pleocytosis, headaches, dysacousis, and alopecia. These patients with Vogt-Koyanagi-Harada (VKH) syndrome improved clinically while they were pregnant after the discontinuation of corticosteroid treatment. They developed recurrent symptoms and findings after termination of their pregnancies. We speculate that changes in immunity and humoral constituents during pregnancy account for their remissions. It is important to assess the menstrual history and to avoid pregnancy before initiating steroid treatment for VKH syndrome.
In this case and previously reported cases, VKH syndrome and systemic corticosteroids administered during pregnancy may not precipitate abortion and congenital malformation

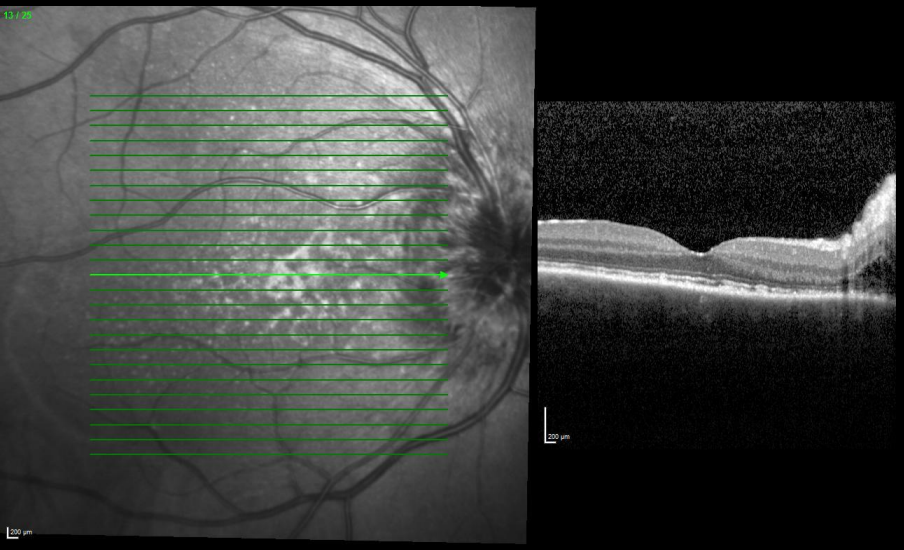
EMRE ÇELİK



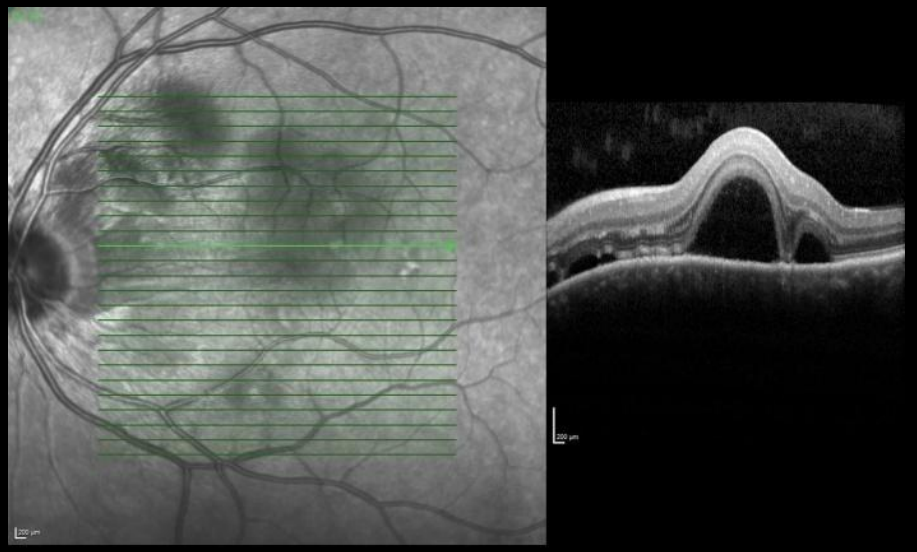




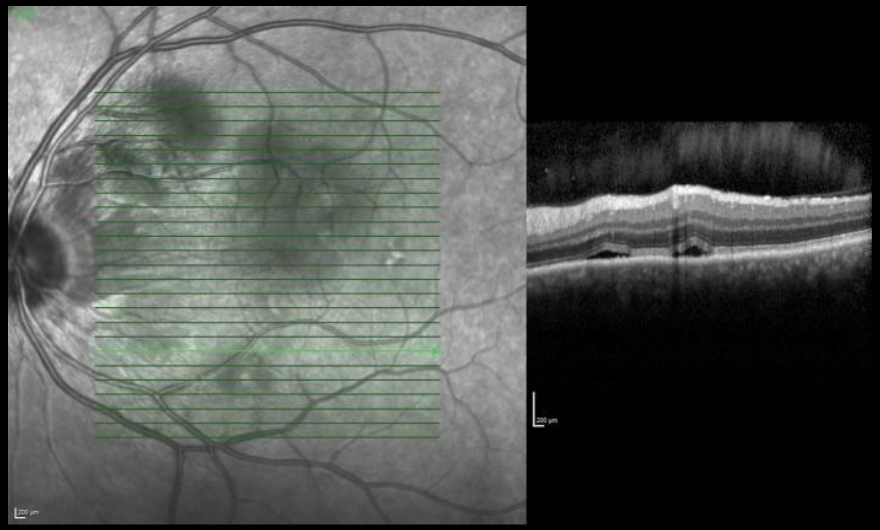




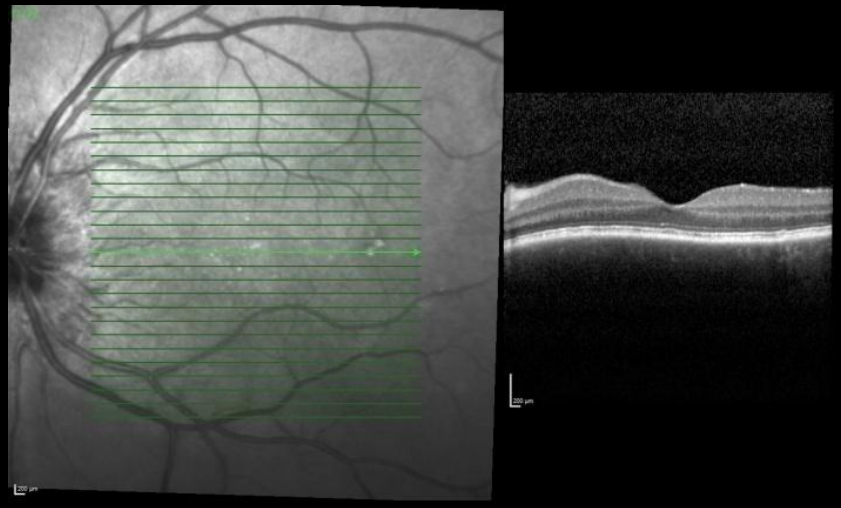
19.03.2012, OD
IR&OCT 30° [HS] ART(42) Q: 25



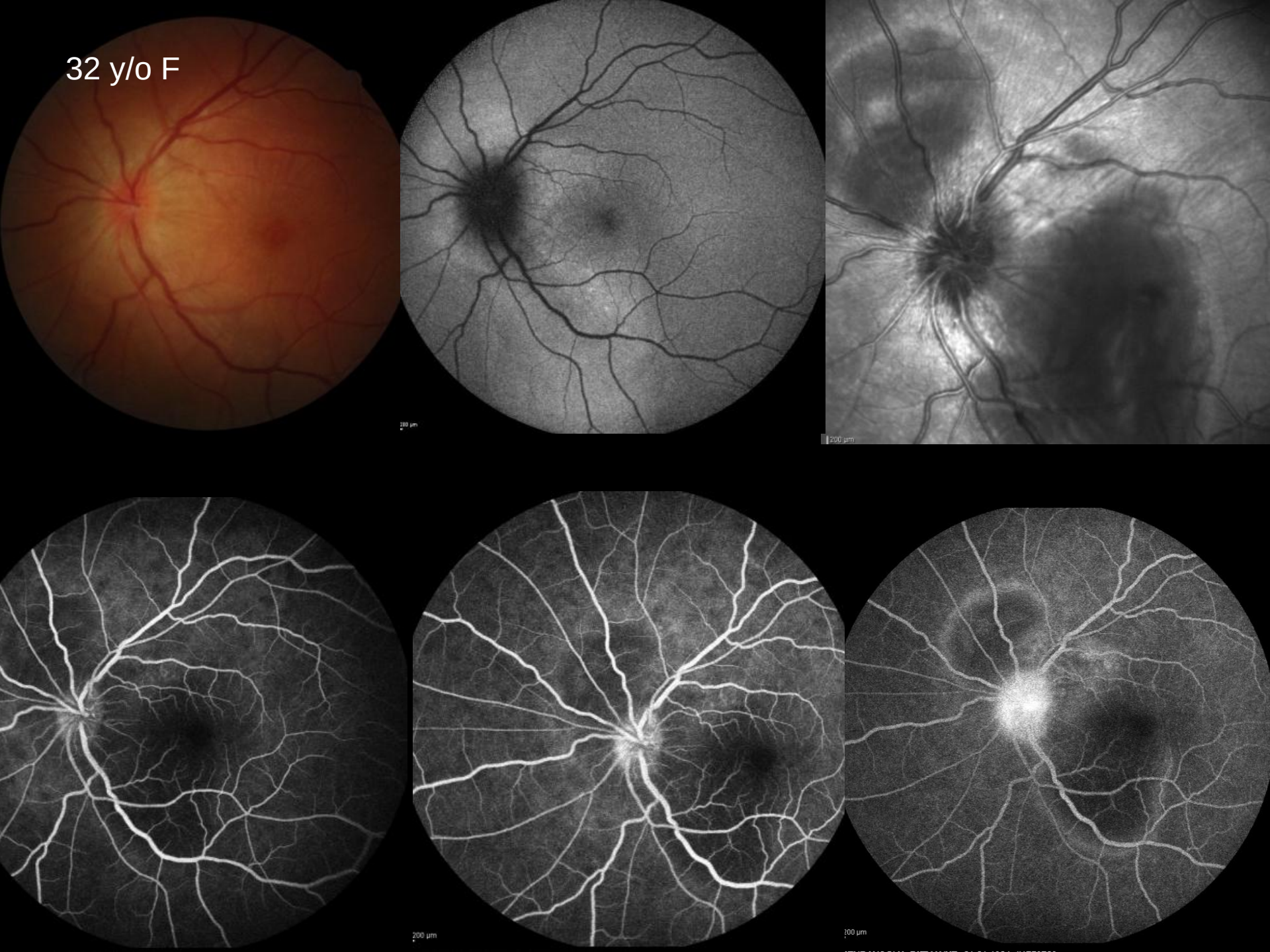
20.01.2012, OS
IR&OCT 30° ART [HS] ART(46) Q: 26



20.01.2012, OS
IR&OCT 30° ART [HS] ART(42) Q: 25



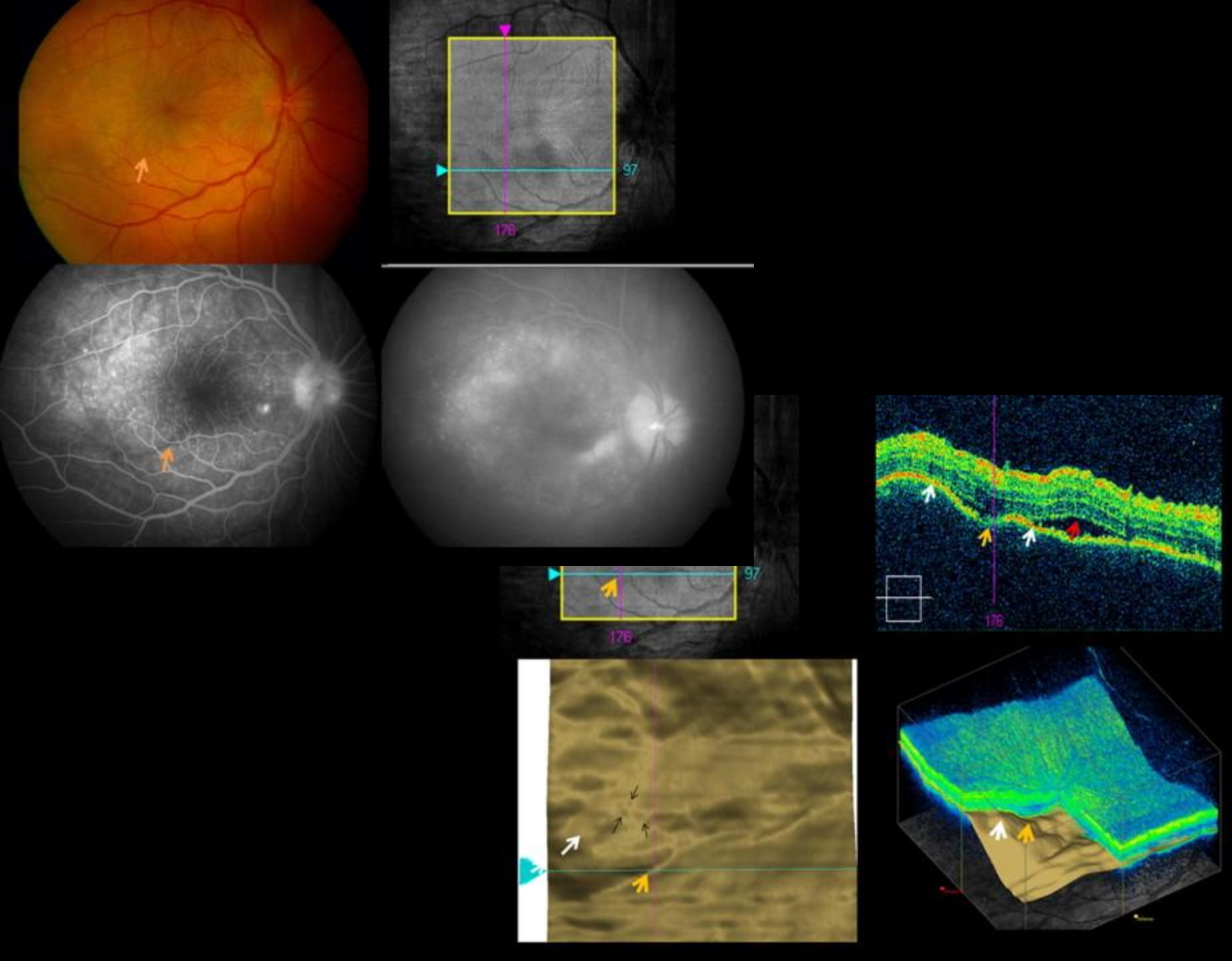
19.03.2012, OS
IR&OCT 30° ART [HS] ART(43) Q: 25

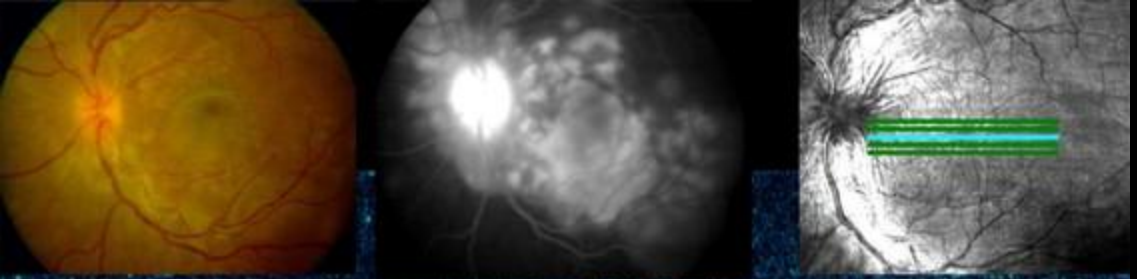

32 y/o F
200 µm
200 µm
200 µm

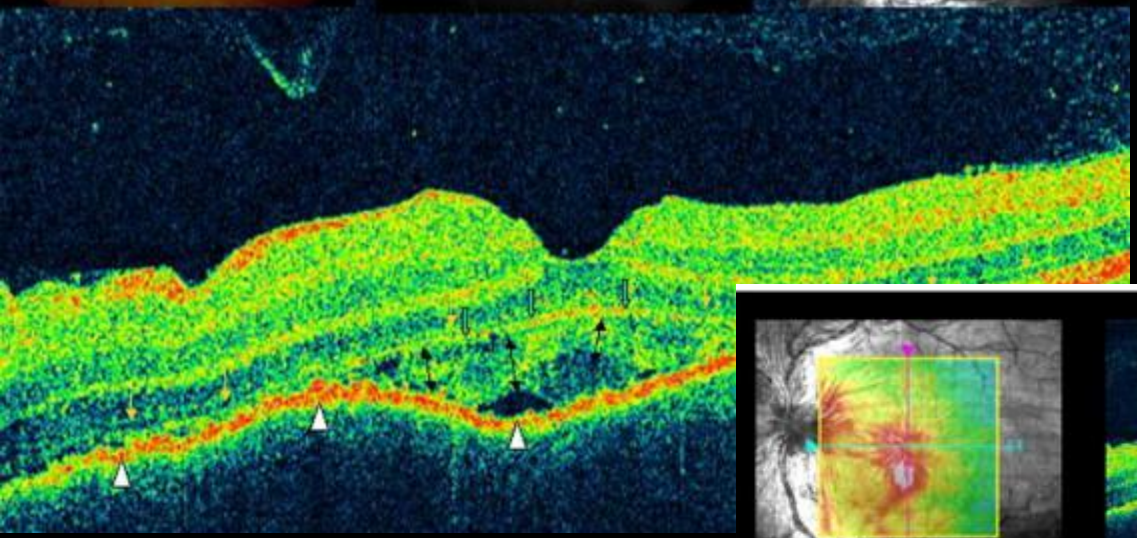
- Case series
- Detailed description of the clinical features of VKH disease and prognosis in patients living in southern Turkey
- 6 females and one male patient
- The mean age at presentation was 33 years (7-52)
- Follow-up was 1 to 5 yrs
- The most common complication was cataract formation. All the patients had favorable visual outcome at the end of the follow-up.
- A.uveitic stage ST,then immunsupressives

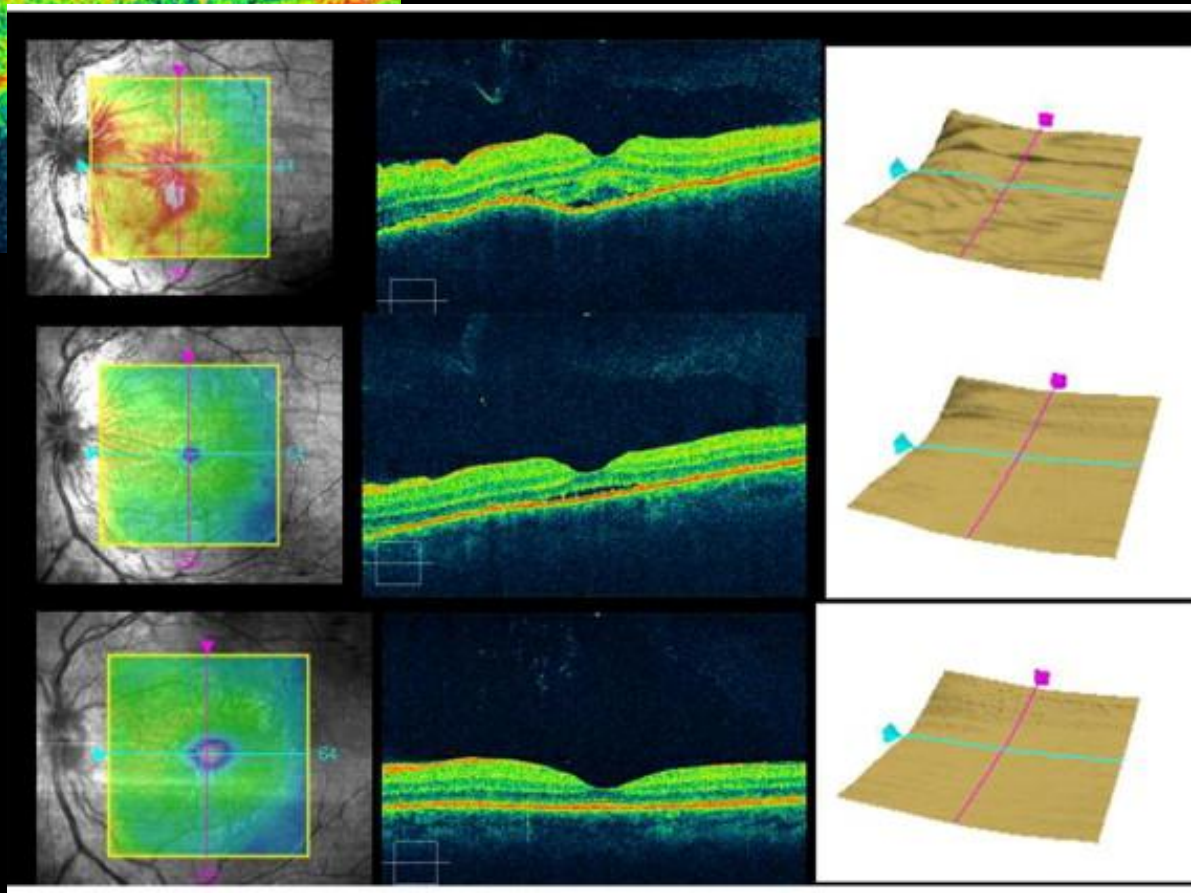
CONCLUSIONS

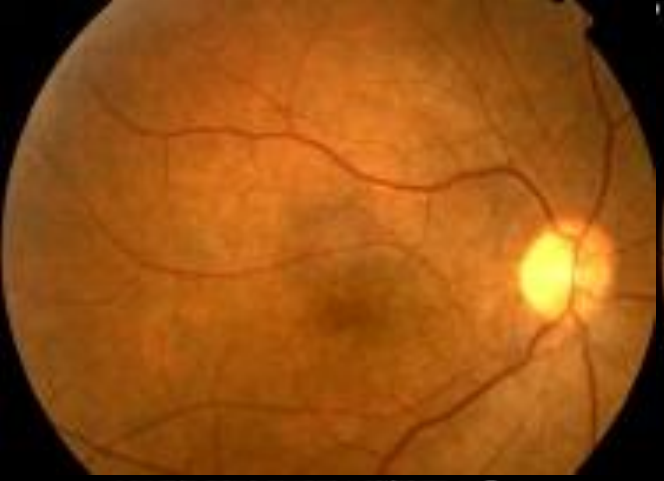
	Time elapsed	Initial VA	Final VA	Follow-up	complication
1.	2 wks	CF	0.5-1.0	5 yrs	Cataract,sek.glaucoma
2.	3 wks	CF	0.3-0.6	1 yr	ø
3.	2 wks	0.2-0.4	1.0 OU	1 yr	ø
4.	2 wks	CF	0.2 OU	1.5 yrs	ø
5.	3 wks	0.5-0.7	0.2	2 yrs	cataract
6.	3 wks	0.4-0.6	0.6 OU	1 yr	cataract
7.	3 mo.	0.7	1.0	2yrs	ø

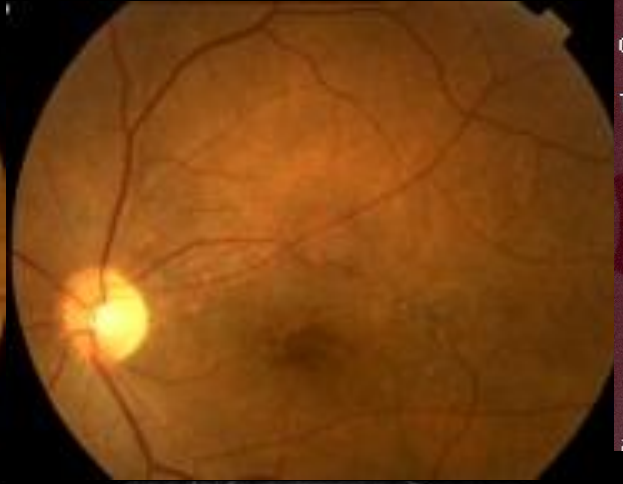

97
176
97
176
176

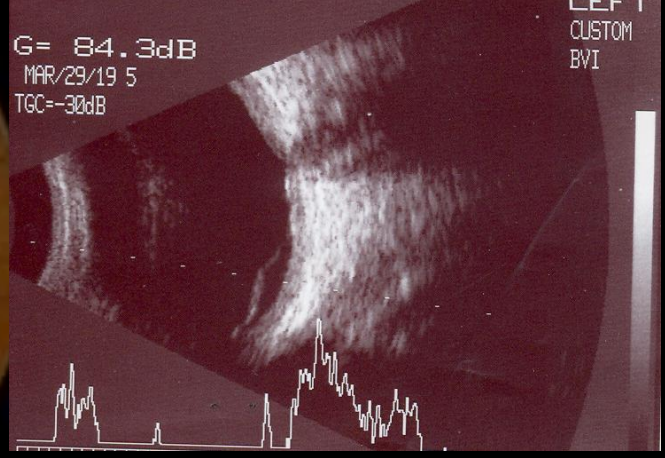


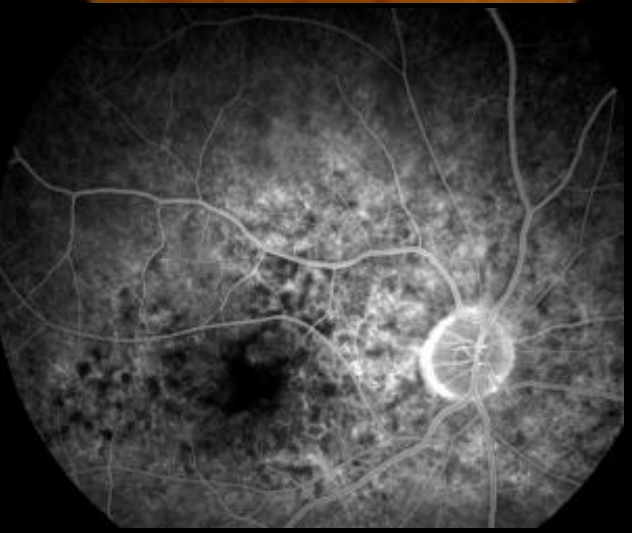


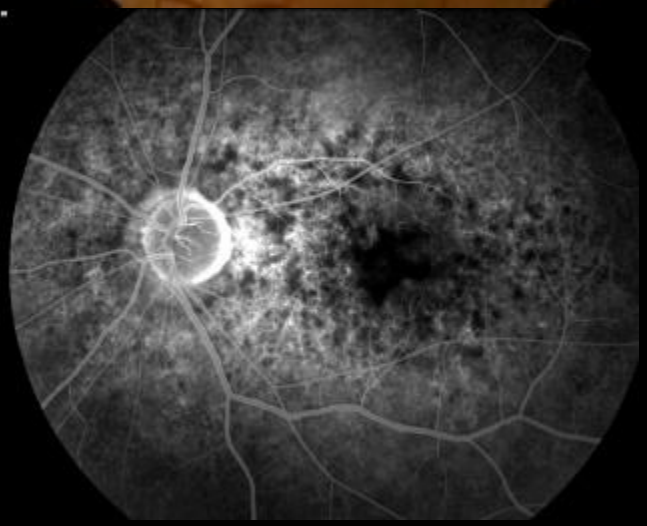


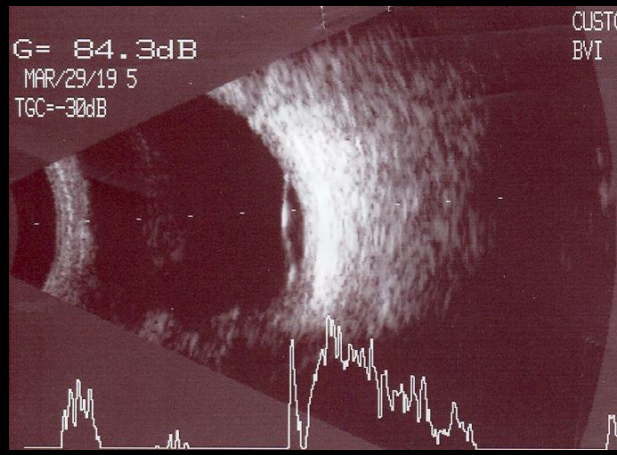






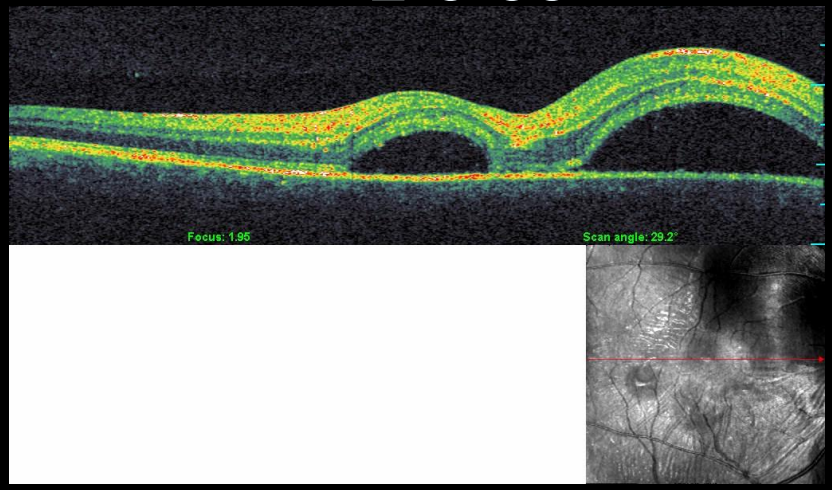


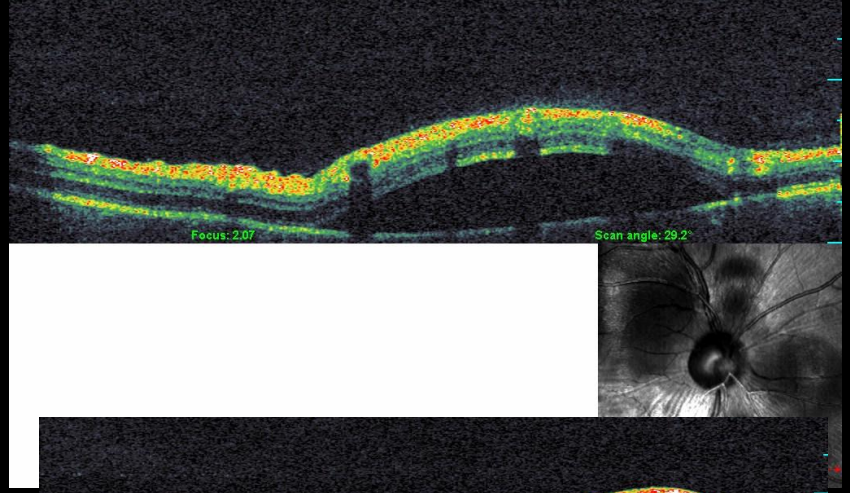


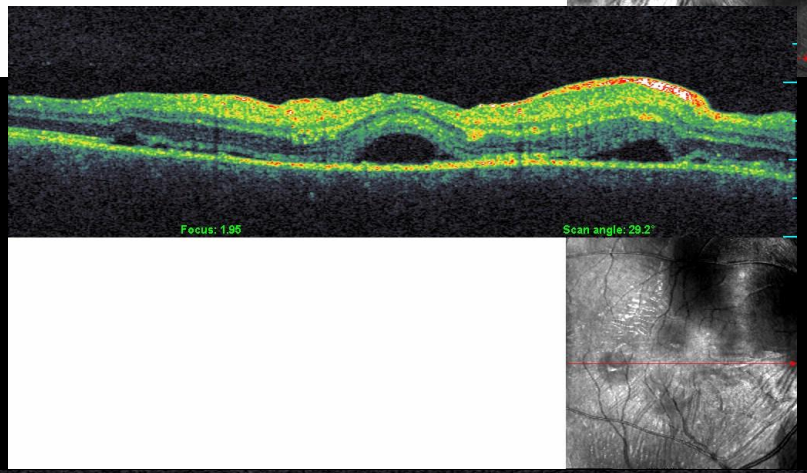


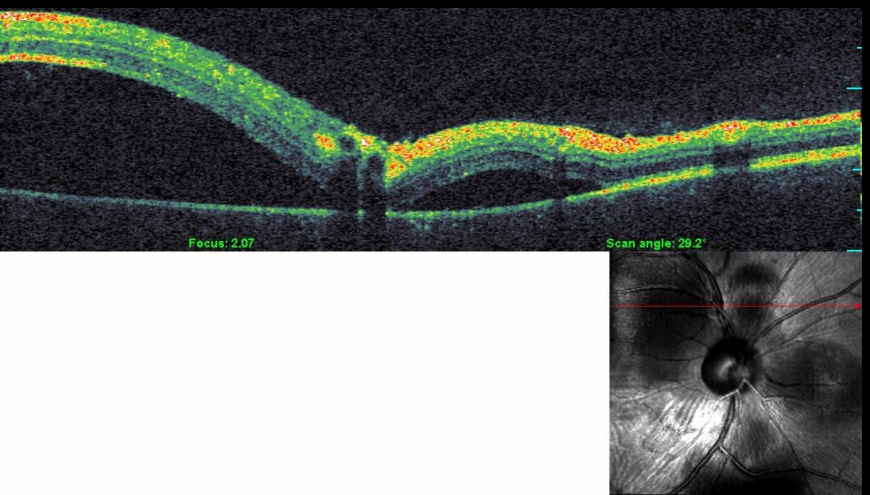
47 y/o F
VA:0.4,0.6
Headache,tinnitus
AU,serous detachment
incomplete

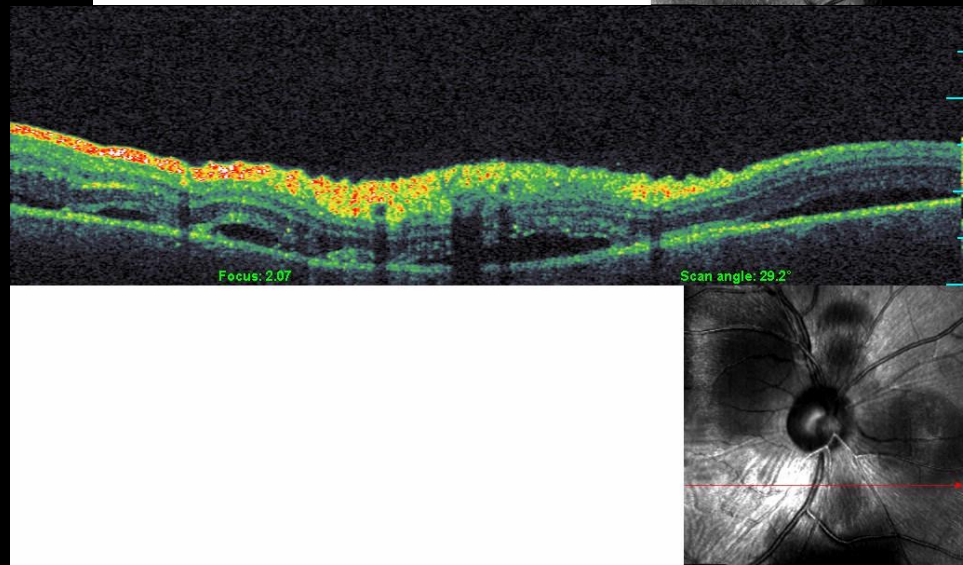
24Y E
3 gündür baş ağrısı
V:0.1
1.6.09

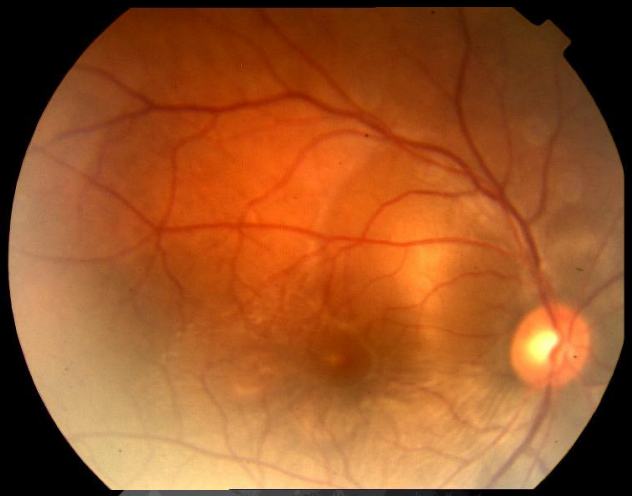
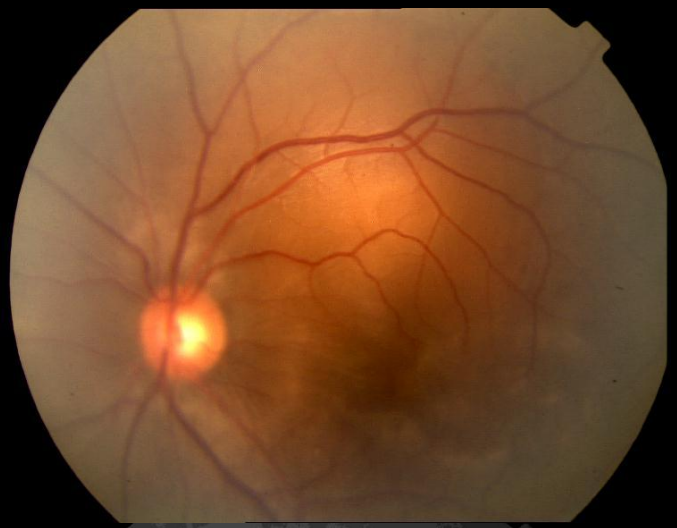
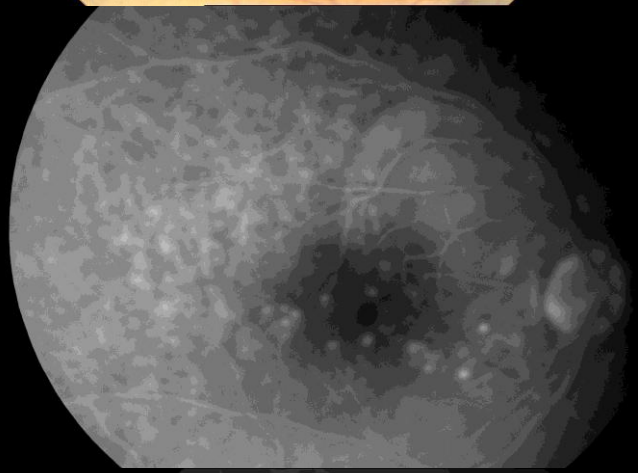
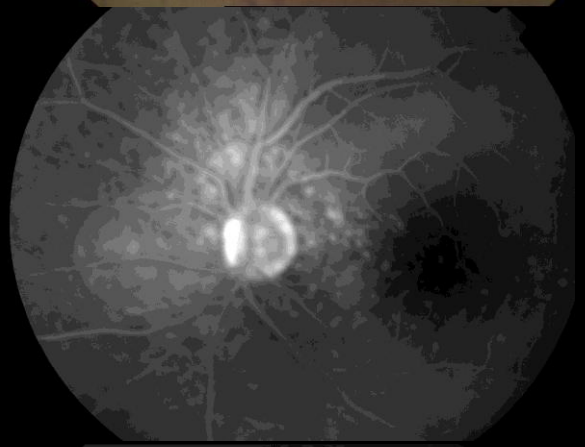
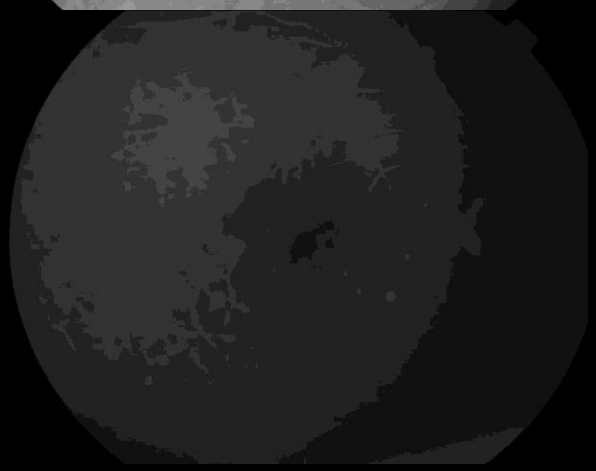
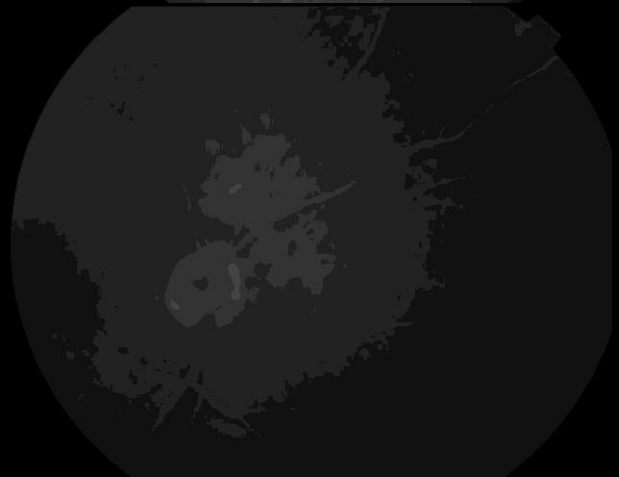




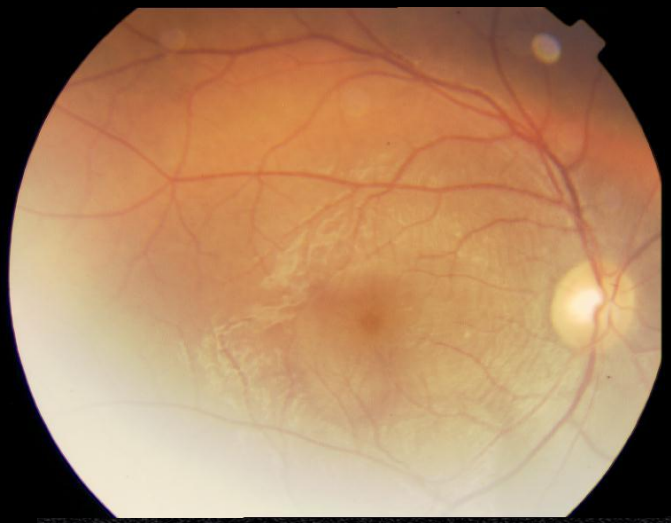




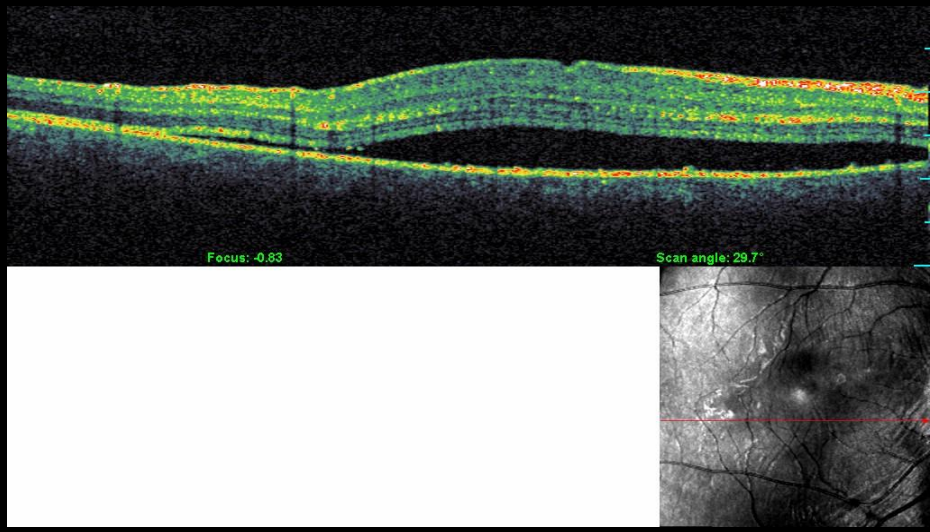


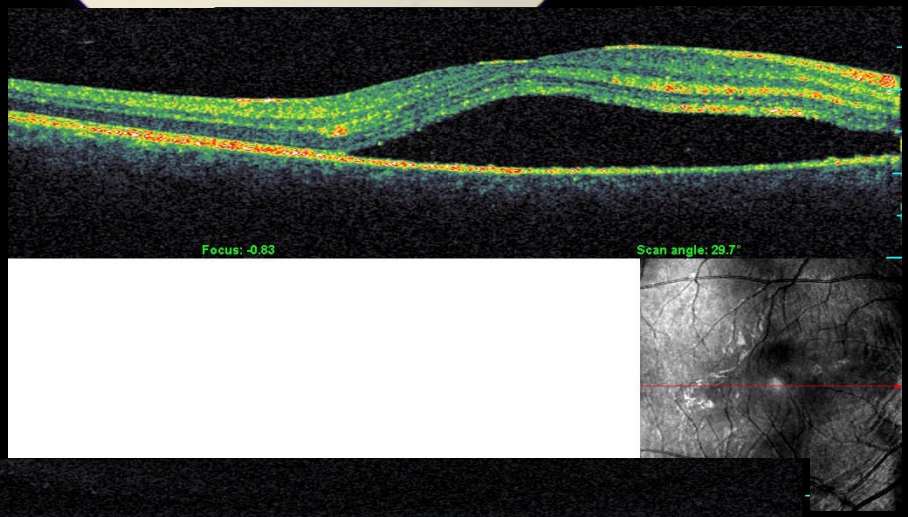







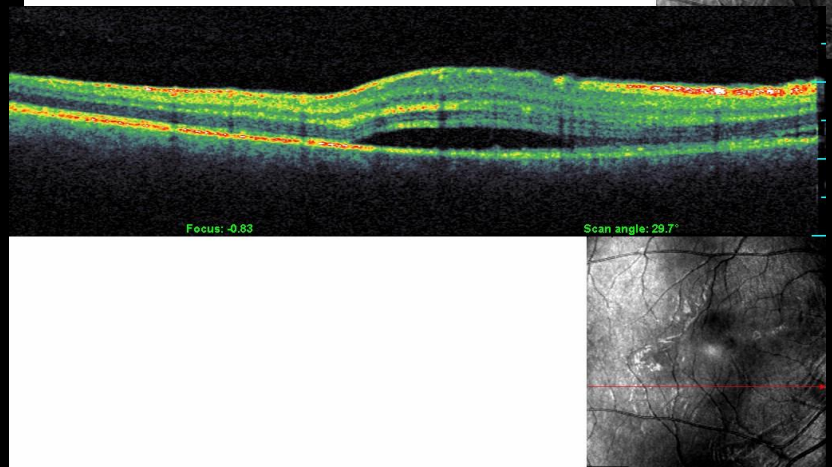
1.6.09

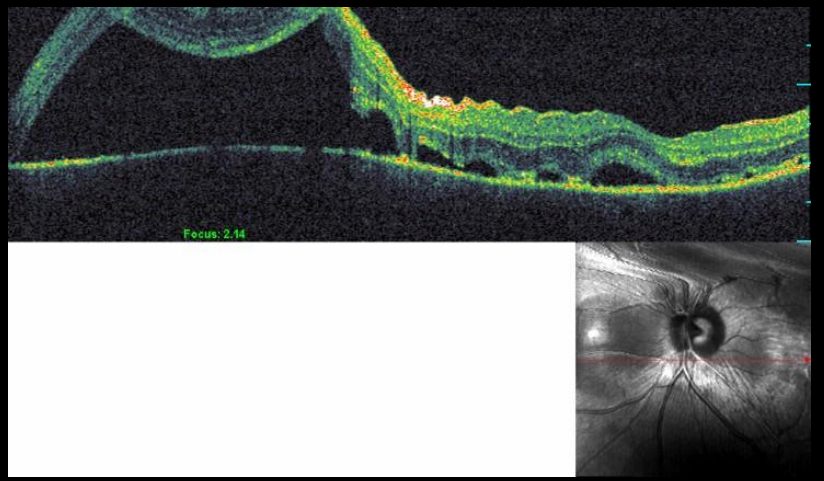


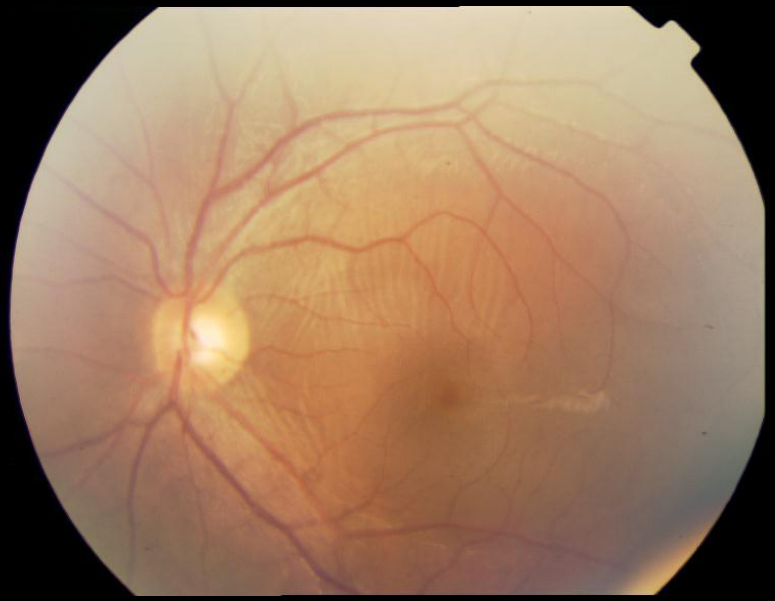
3.gün

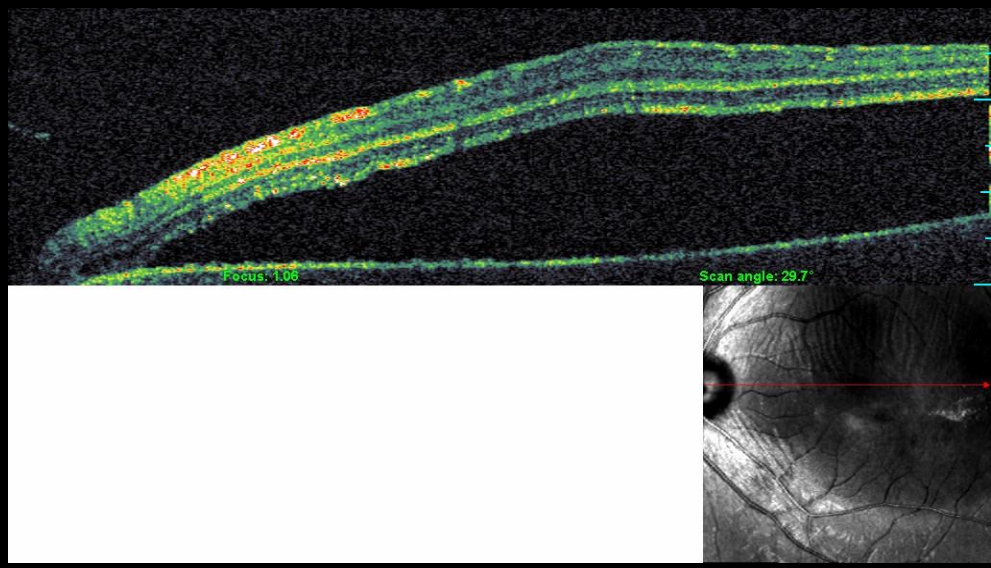

Focus: -0.83
Scan angle: 29.7°

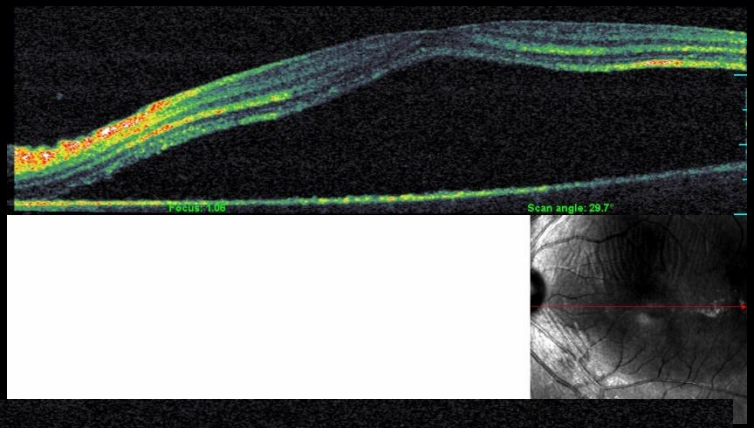

Focus: -0.83
Scan angle: 29.7°

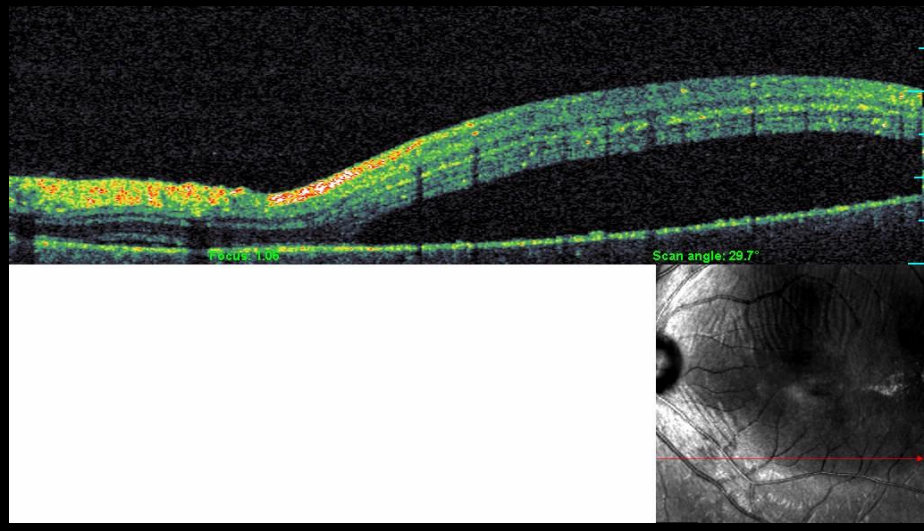

Focus: -0.83
Scan angle: 29.7°

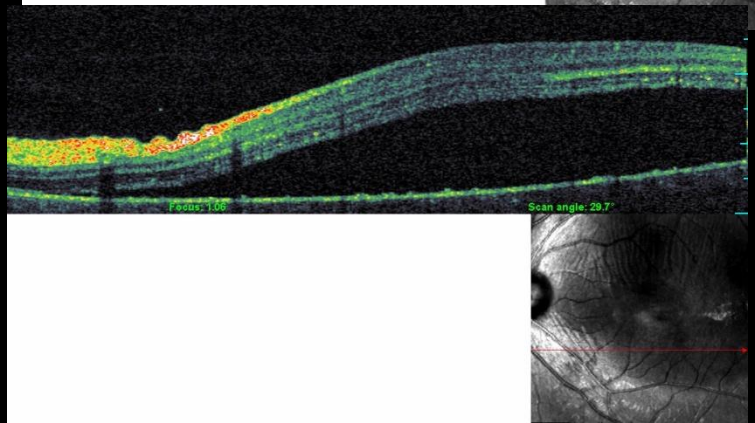

Focus: 2.14



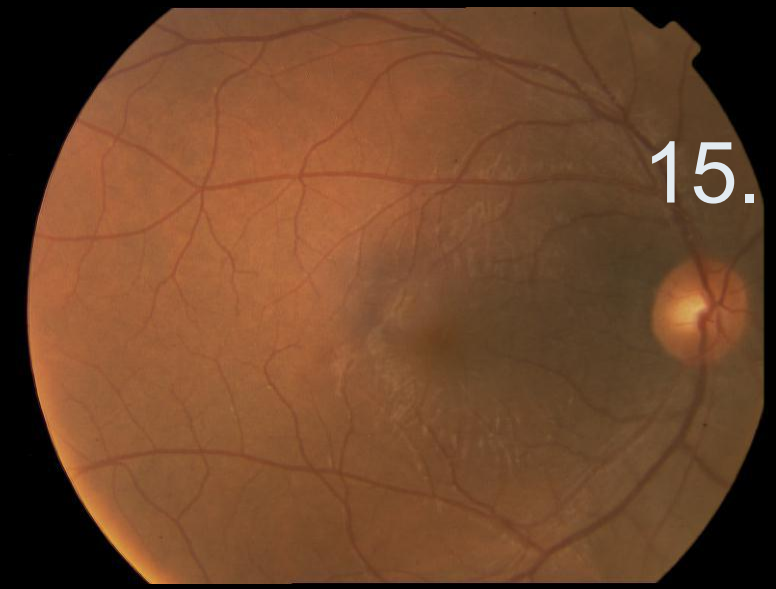

Focus: 1.06
Scan angle: 29.7°

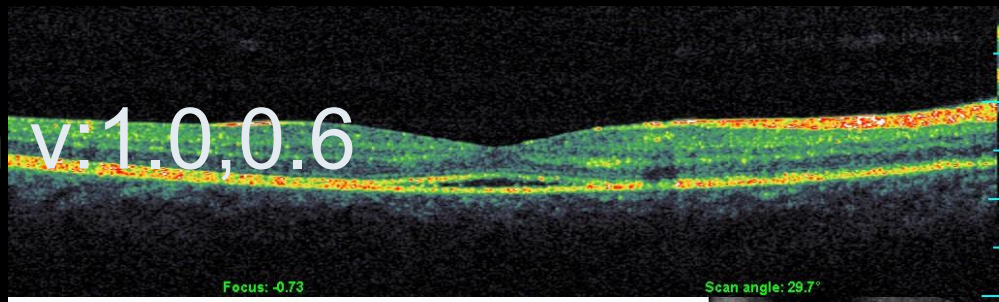

Focus: 1.06
Scan angle: 29.7°

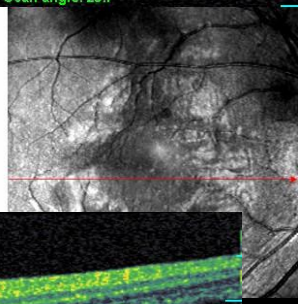

Focus: 1.06
Scan angle: 29.7°

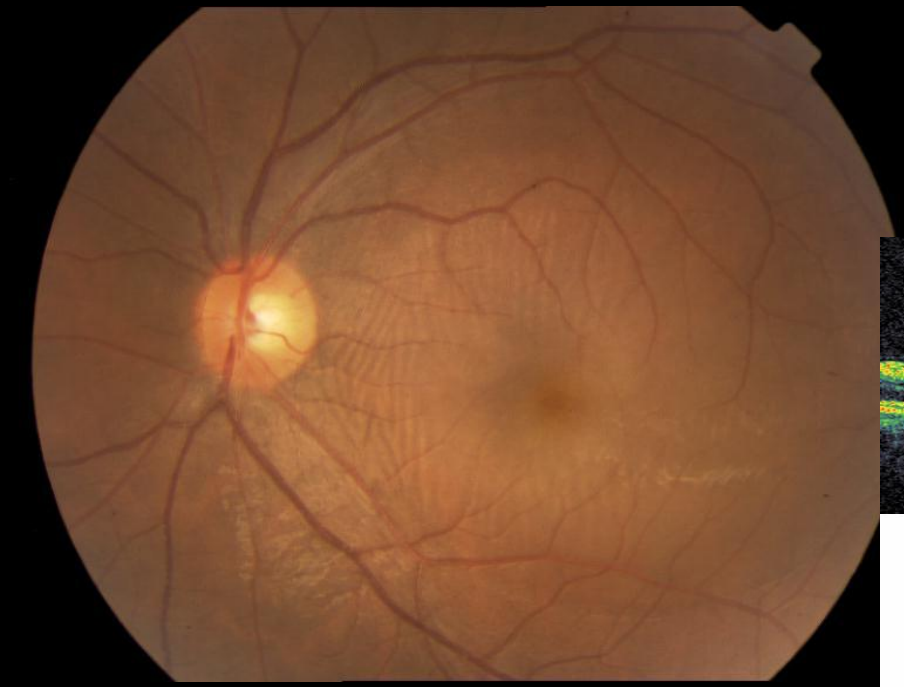

Focus: 1.06
Scan angle: 29.7°

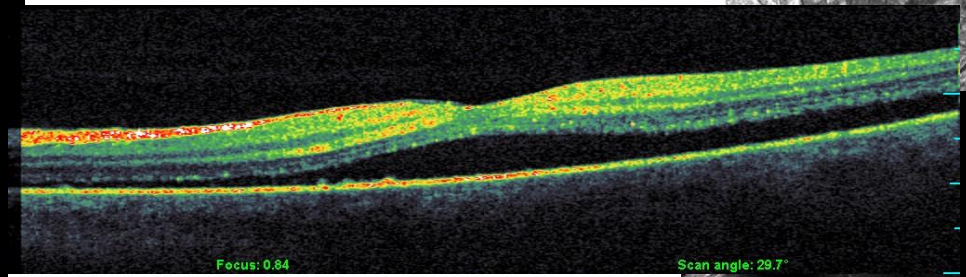
15. gün v: 1.0,0.6

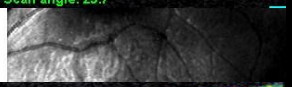


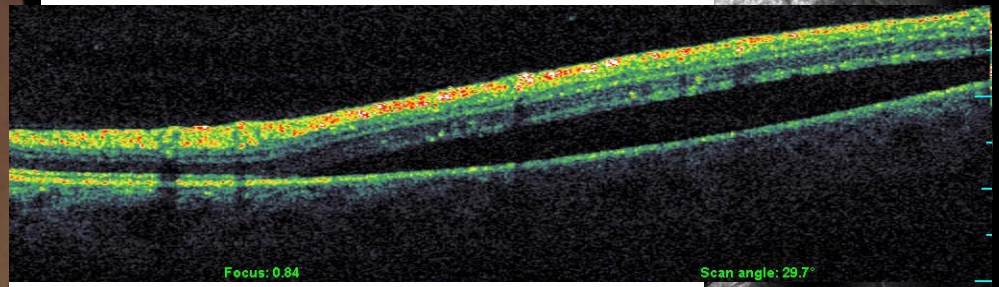

Focus: -0.73
Scan angle: 29.7°

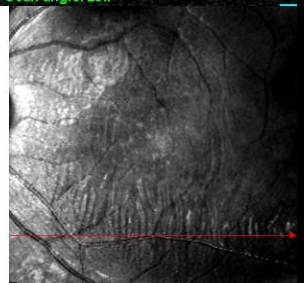





Focus: 0.84
Scan angle: 29.7°




Focus: 0.84
Scan angle: 29.7°



- VKH disease is rare in Turkey.
- Majority of patients with VKH in Turkey do not have the complete form of the disease.
- Most patients with VKH are late referrals.
- Ocular complications were common among these late referrals.
  - Tugal-Tutkun I et al. **The spectrum of Vogt-Koyanagi-Harada disease in Turkey: VKH in Turkey.** Int Ophthalmol.2007 Apr-Jun;27(2-3):117-23.