

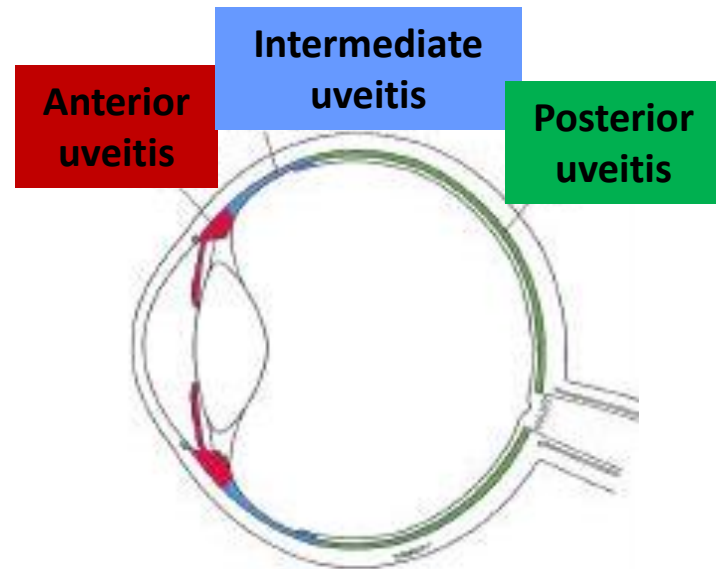


HİV VE GÖZ

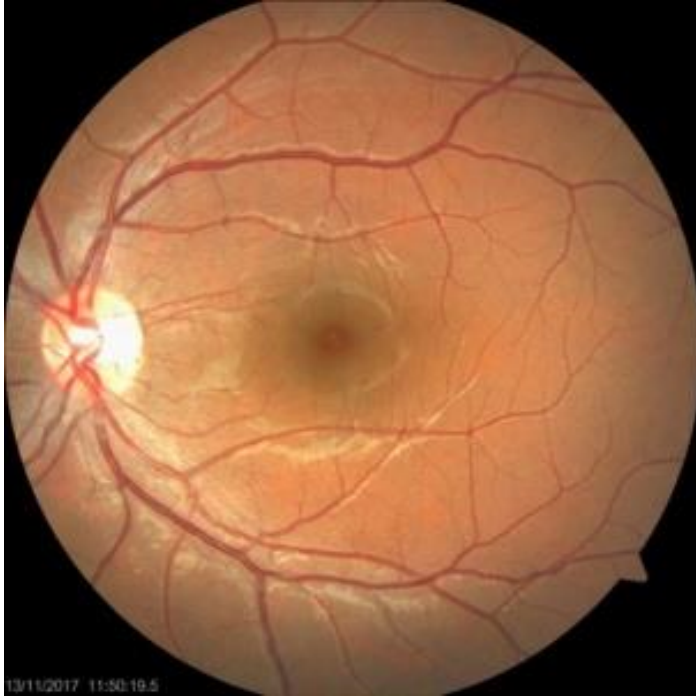
DR DİDAR UÇAR
İSTANBUL ÜNİVERSİTESİ-CERRAHPAŞA
18.06.2023

IUSG SINIFLAMASI

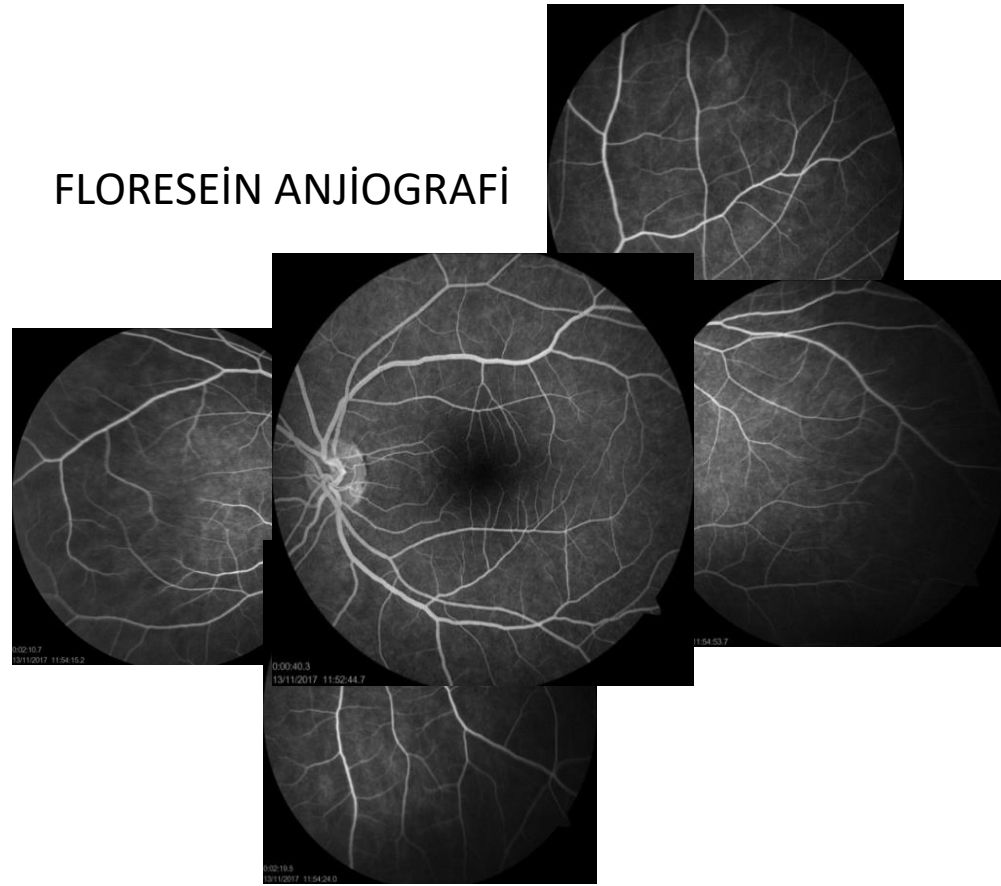
- **Anterior üveit:** iris + pars plicata
- **Intermediate üveit:** pars plana + vitreous
- **Posterior üveit:** retina + choroid
- **Panüveit**



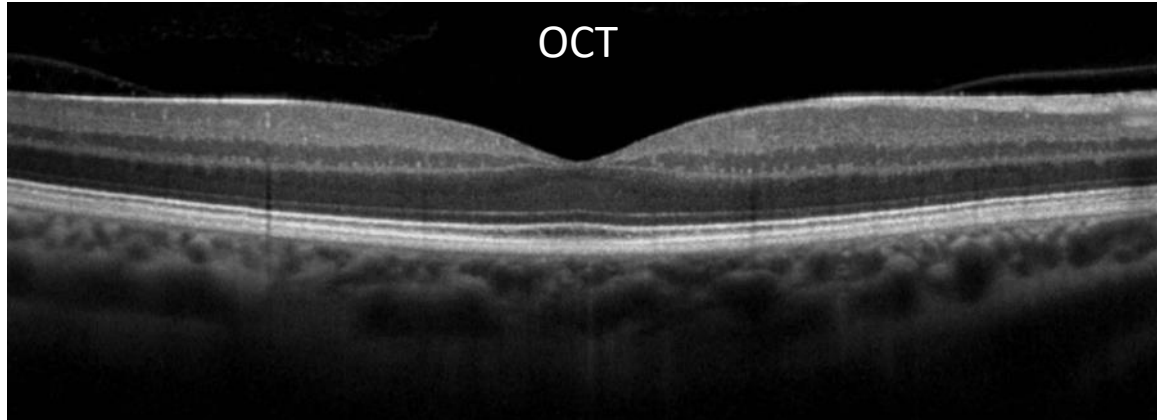
RENKLİ FUNDUS FOTOĞRAFI



FLORESEİN ANJİOGRAFI



OCT



HIV – GÖZ TUTULUMU

GÖZ ETRAFINDA

- Molluscum contagiosum
- Herpes Zoster Oftalmikus
- Kaposi Sarkomu
- Konjoktival skuamöz hücreli karsinom
- Trikomegali

ÖN SEGMENT

- Kuru göz
- Ön üveit

ARKA SEGMENT

- **Retinal Mikrovaskülopati**
- **CMV Retiniti**
- **Sifiliz Retiniti**
- Akut Retinal Nekroz
- **Tüberküloz**
- **Toksoplazmozis Retinokoroiditi**
- Progresif Outer Retinal Nekroz
- Candida albicans endoftalmisi

HIV POSTERİOR BULGULAR

HIV'E BAĞLI

- HIV retinopati (mikrovasküler)
- Vaskülit, okluzif vaskülopati
- Kronik multifokal retinal infiltratlar
- **Optik nöropati**

NON-ENFEKSİYÖZ

- Intraocular lenfoma
- Immune recovery uveitis
- Drug-induced

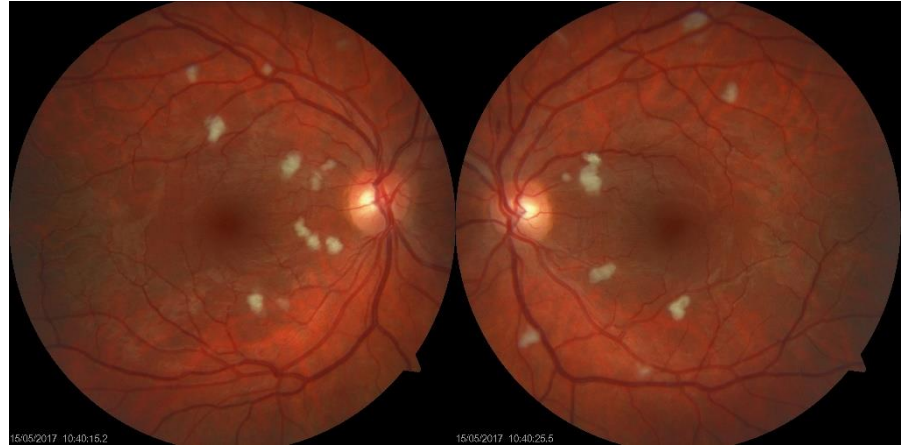
ENFEKSİYÖZ

- **CMV retinitis**
- **Sifiliz**
- **Tüberküloz**
- **Toksoplazma**
- Acute retinal nekroz
- Progressif outer retinal nekroz
- Kriptokok, Histoplazmozis, Candidiazis

CD4 T-lenfosit (hüc/μL)	KOMPLİKASYON
<500	Herpes zoster oftalmikus Dissemine tüberküloz Oral Kandidiazis → sistemik
<250	Lenfoma Kaposi sarkomu
<150	Pneumocystosis Toksoplazmozis Koksidioidomikozis M. avium complex Varicella zoster viral retinitis Mikrosporidiozis Özofageal kandidiazis → sistemik
<100 özellikle <50	CMV retiniti

HIV RETİNOPATİ

- %50-70 HIV + bireylerde
- **EN SIK GÖZ BULGUSU**
- HAART ile prevalansta azalma
- Gelip geçici yumuşak eksüdalar,
intraretinal hemorajiler ve
mikroanevrizma



- *Dadgostar H, et al. Hemorheologic abnormalities associated with HIV infection: in vivo assessment of retinal microvascular blood flow. Invest Ophthalmol Vis Sci. 2006*
- *Engstrom RE Jr, et al. Hemorheologic abnormalities in patients with human immunodeficiency virus infection and ophthalmic microvasculopathy. Am J Ophthalmol. 1990*
- *Engstrom RE Jr, et al. The progressive outer retinal necrosis syndrome. A variant of necrotizing herpetic retinopathy in patients with AIDS. Ophthalmology. 1994*

HIV RETİNOPATİ



CD4:3, viral yük 494K

- Genellikle asemptomatiktir
 - Azalmış renk görme
 - Azalmış kontrast duyarlılığı
 - Görme alanı defekti
- **Geniş yumuşak eksüda → CMV retiniti ????**

Yumuşak eksüda → retina sinir lifi tabakasında aksonal hasar

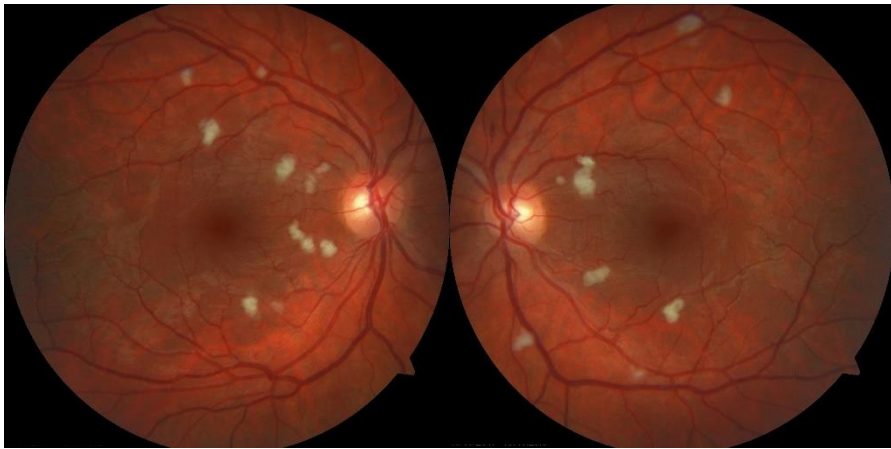


CD4: 3, viral yük 660K, semptom yok

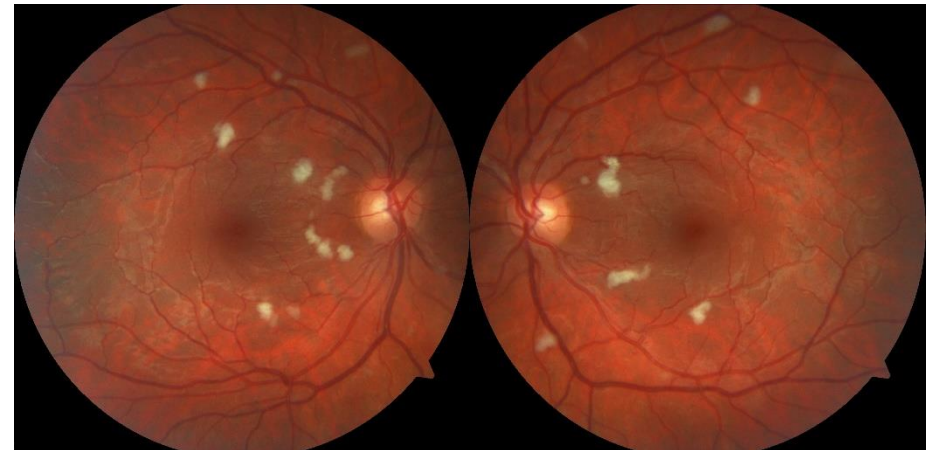
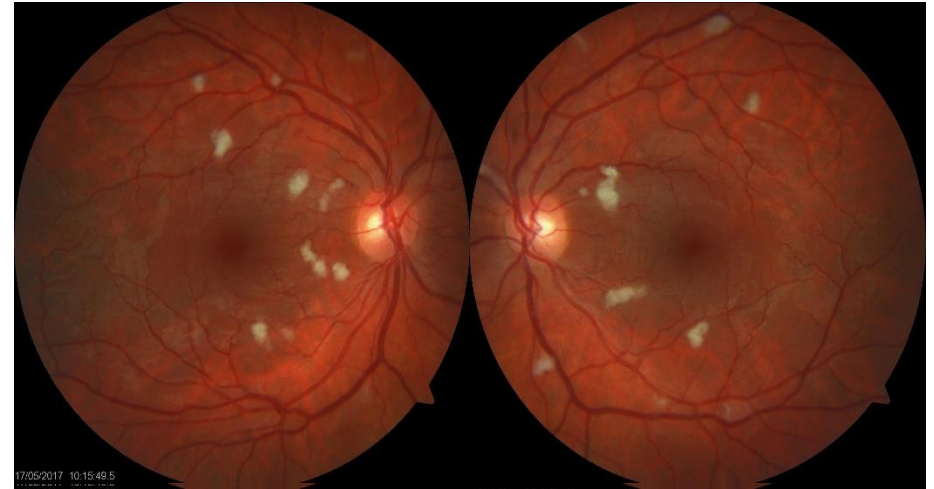


CD4: > 200

İMMÜN TOPARLANMA SONRASI



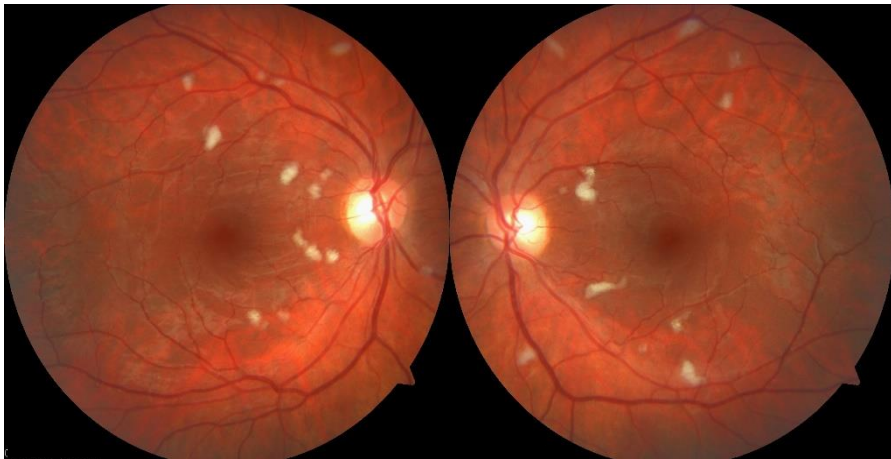
1. HAFTA



2. HAFTA



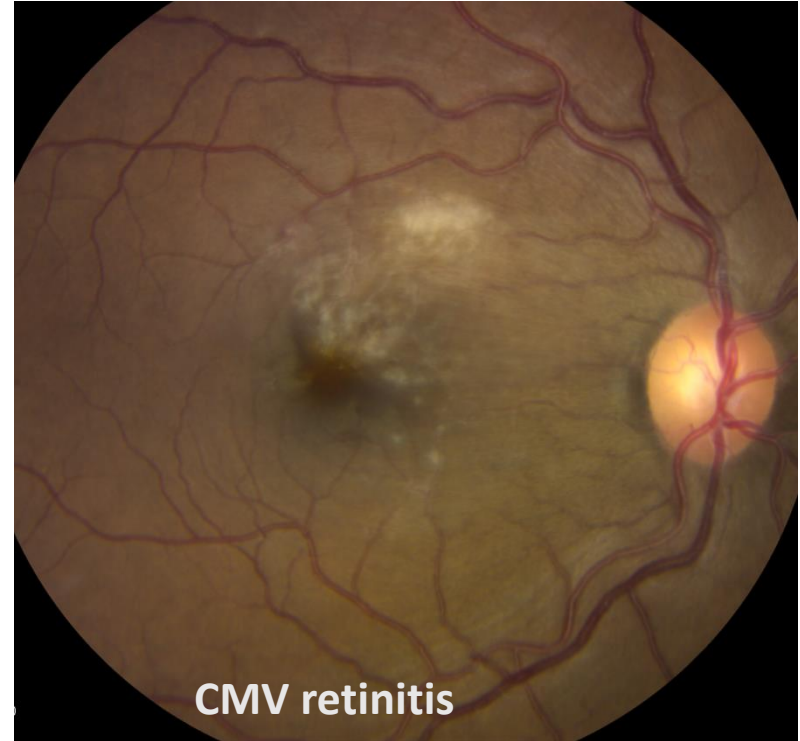
3. HAFTA



YUMUŞAK EKSÜDA / CMV RETİNİTİ



Yumuşak eksüda



CMV retinitis

CMV RETİNİTİ

- Pre-HAART: **CMV retinitis** → **%20-40**
- Post-HAART: **75-90% CMV retinitinde azalma**
- CMV seroprevalansı erişkinlerde %50 iken MSM HIV + bireylerde %95-100
- HAART altındaki hastada CMV retinitis (+) >> önce **UYUMSUZLUK düşün !!!!**

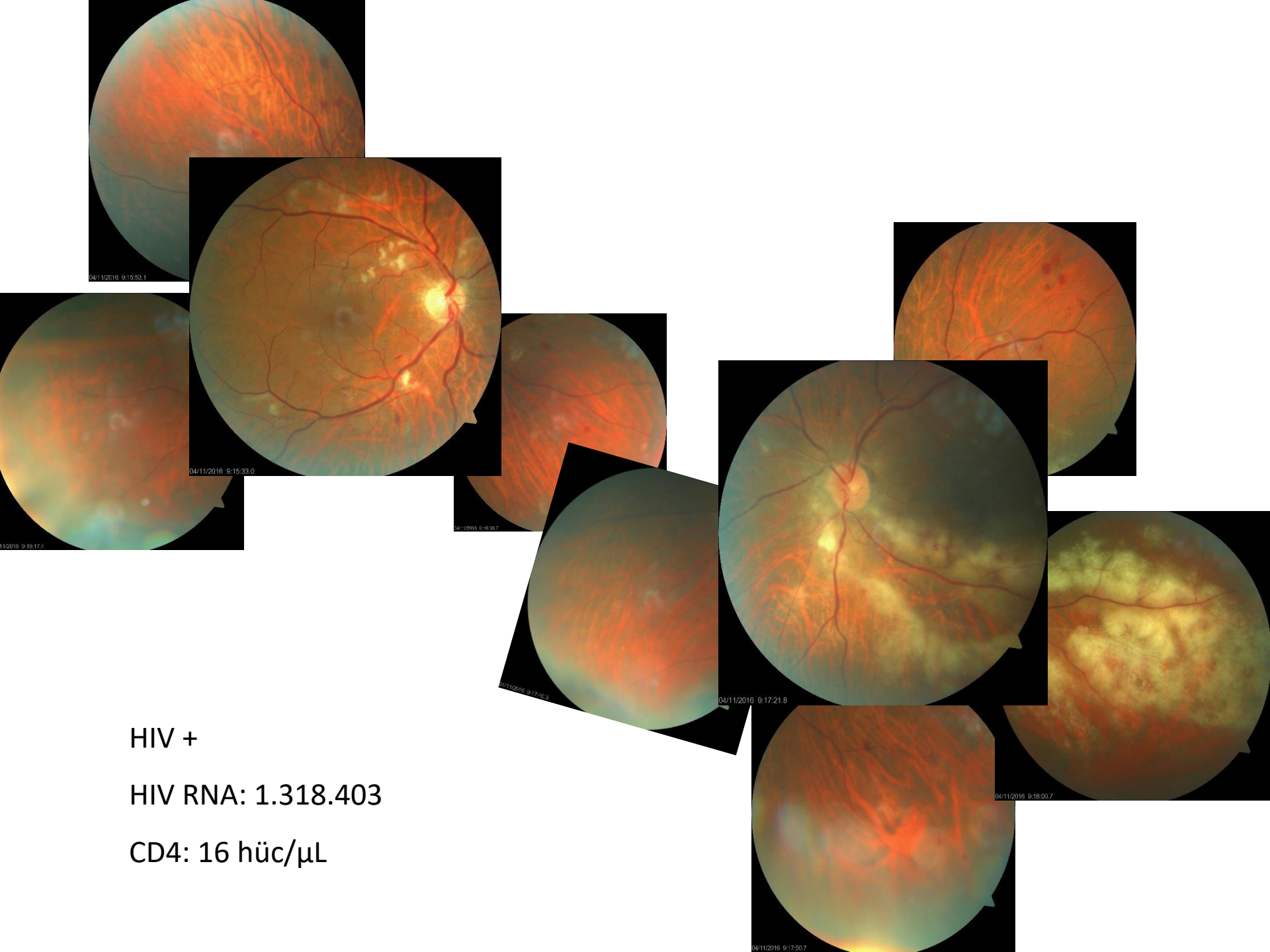
- Kim, D.Y. et al. Comparison of Visual Prognosis and Clinical Features of Cytomegalovirus Retinitis in HIV and Non-HIV Patients. *Retina* 2017
- Chen, C. et al. Comparative analysis of cytomegalovirus retinitis and microvascular retinopathy in patients with acquired immunodeficiency syndrome. *Int. J. Ophthalmol.* 2017
- Teoh, S.C. et al. The epidemiology and incidence of cytomegalovirus retinitis in the HIV population in Singapore over 6 years. *Invest. Ophthalmol. Vis. Sci.* 2012

HIV - CMV RETİNİTİ

- Yarıdan fazlasında asemptomatik
 - Rutin oftalmik muayenede tespit edilmiş
- Semptomlar
 - En sık → Puslu görme
 - Görmede azalma, ışık çakmaları, uçuşmalar, skotomlar
- Semptom (+)
 - Daha ağır retinit, makula tutulumu, optik sinir tutulumu

TANI

- Tanı klinik olarak konur >> deneyimli bir oftalmolog tarafından dilate fundus muayenesi ile
- Aköz humör veya vitreus örneklerinden PCR bakmak tanıyı destekler ve atipik prezantasyonlarda tanı için yardımcı olabilir.
 - Diğer herpes ailesi üyelerine bağlı retinitlerin veya toxoplazmaya bağlı retinitin ayırıcı tanısında yardımcı olabilir.
- 3 tip klinik prezentasyonu mevcut
 - Granular
 - Fulminan
 - Frosted branch anjiitis

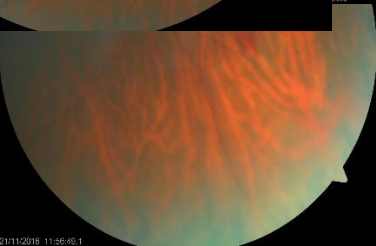
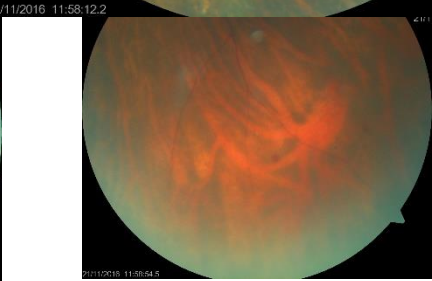
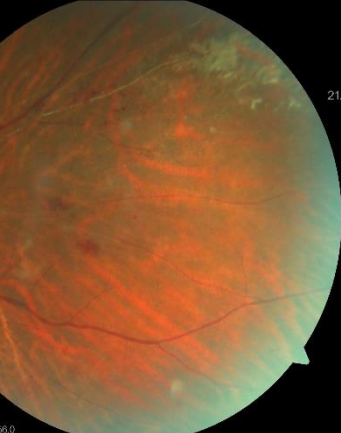
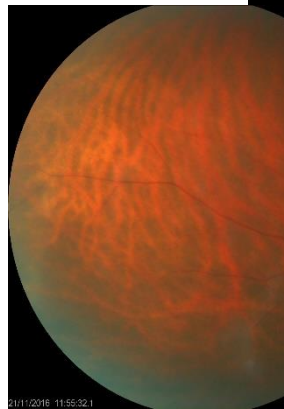
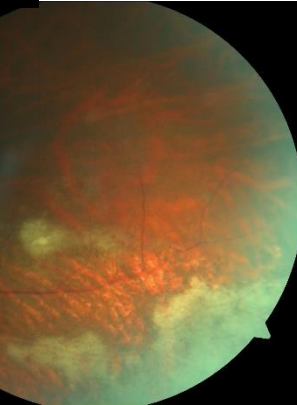
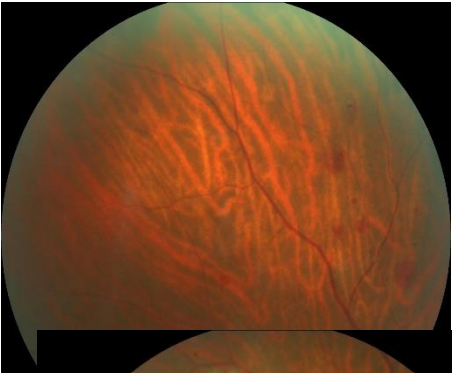
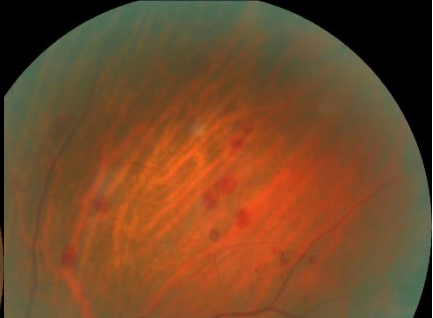
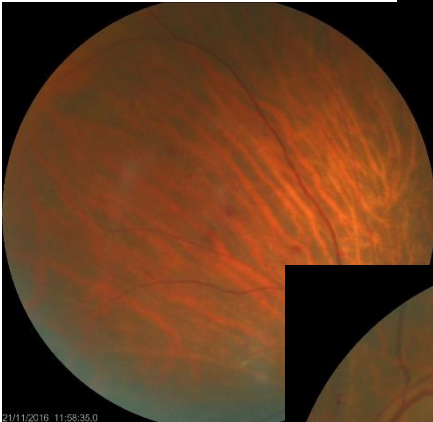


HIV +

HIV RNA: 1.318.403

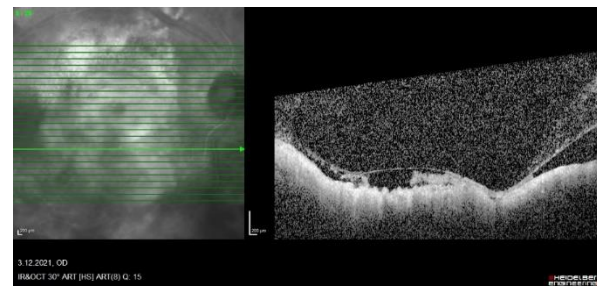
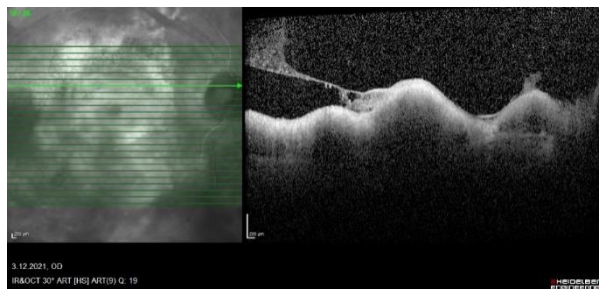
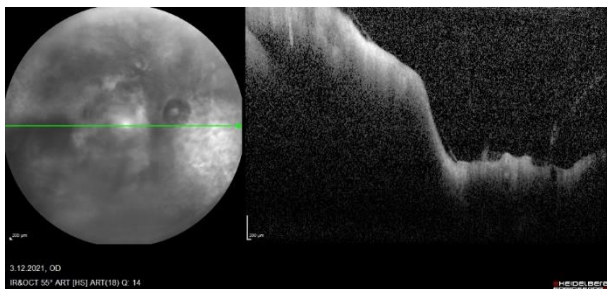
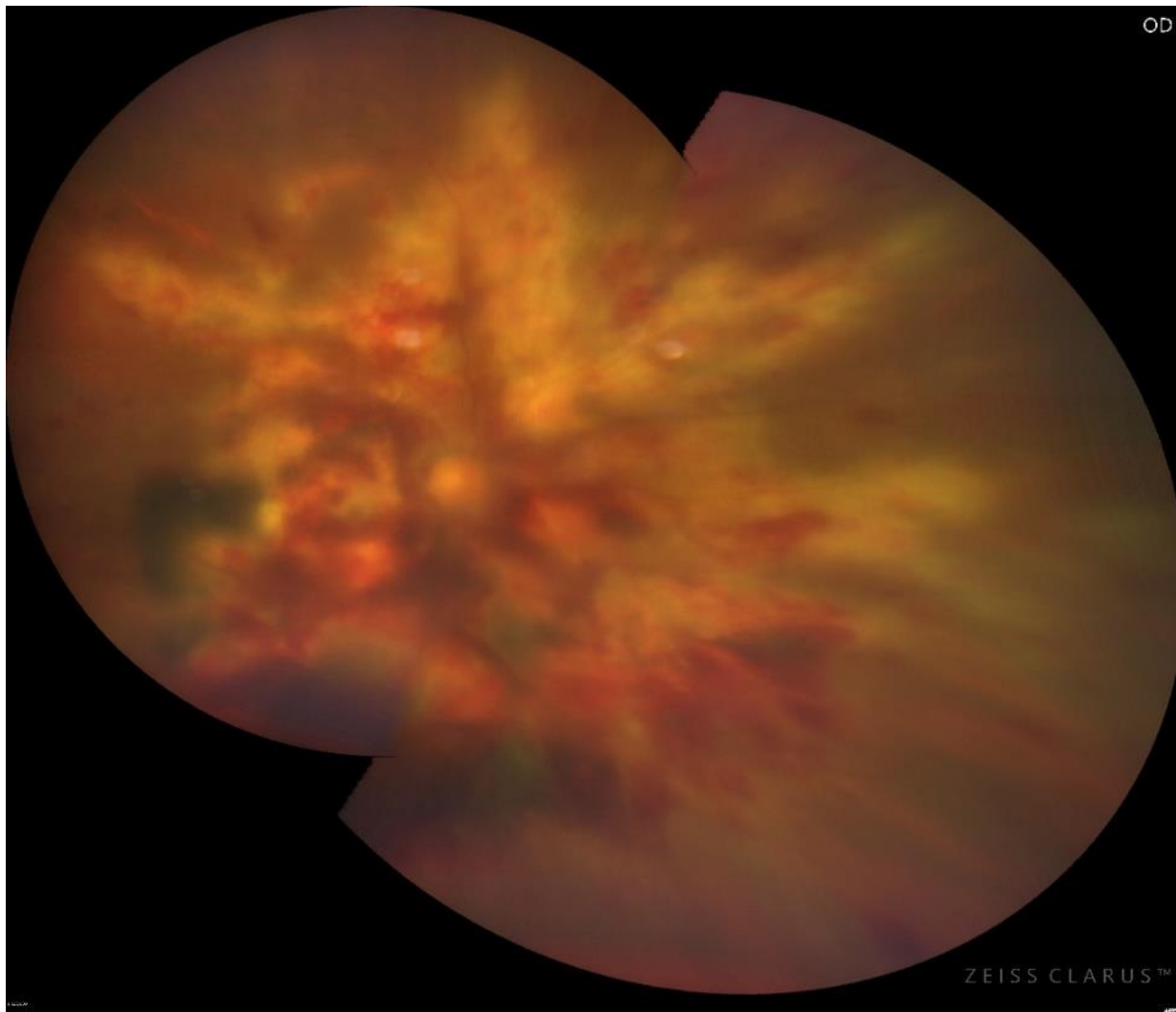
CD4: 16 hüç/ μ L

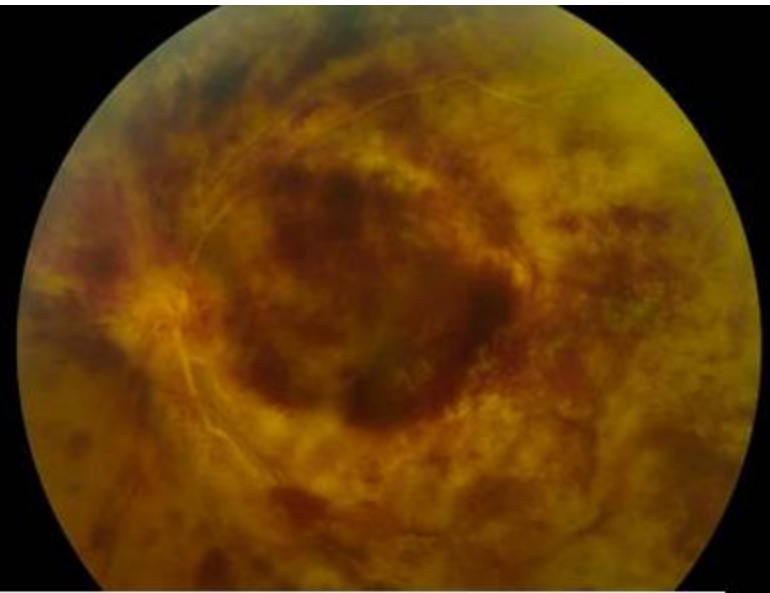
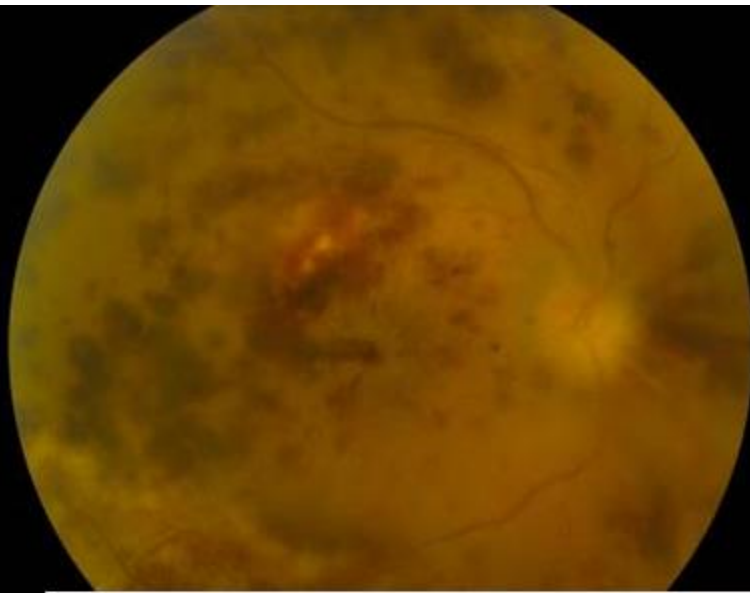
2. HAFTA



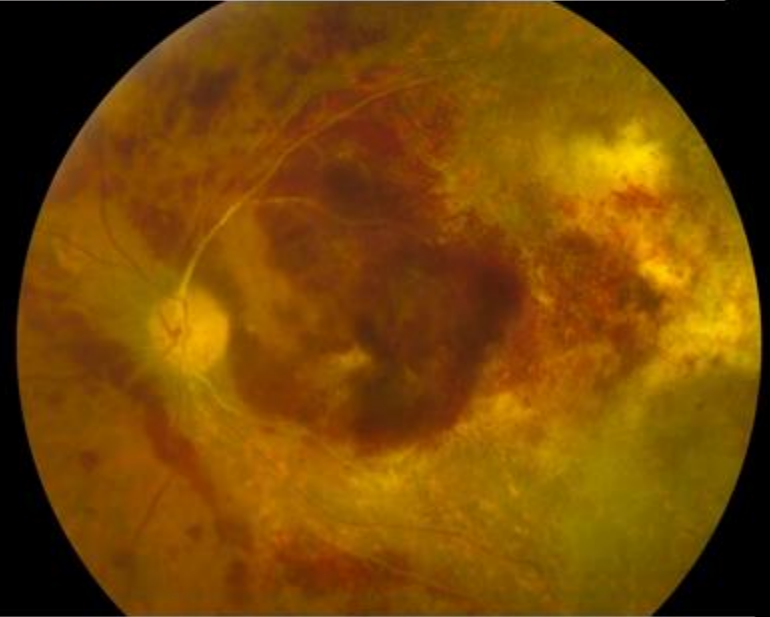
AKTİF LEZYONLARIN GRANÜLER
SINIRLARI VARDIR





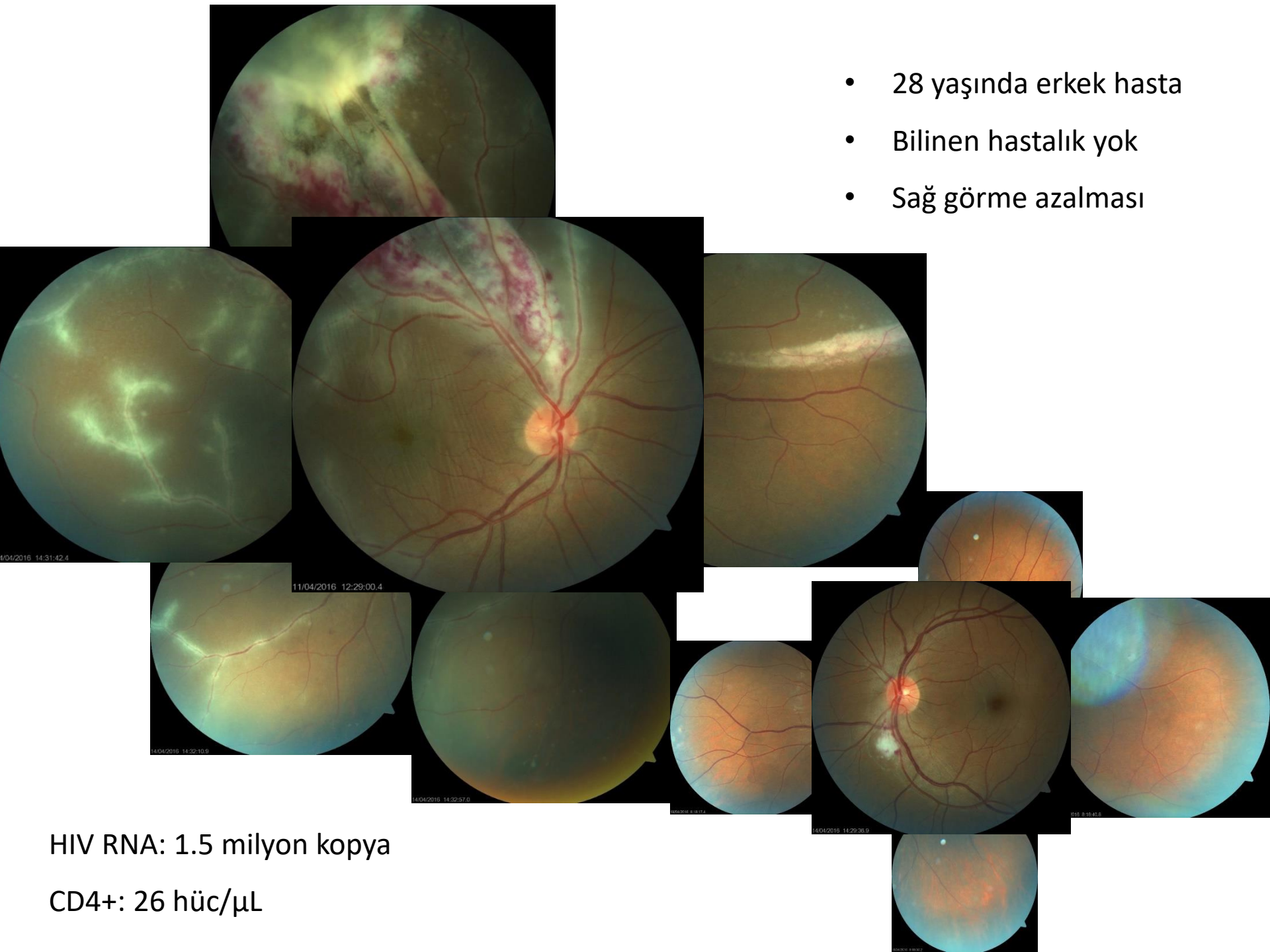


CD4 45, vitreus PCR → CMV+ >250.000 kopya



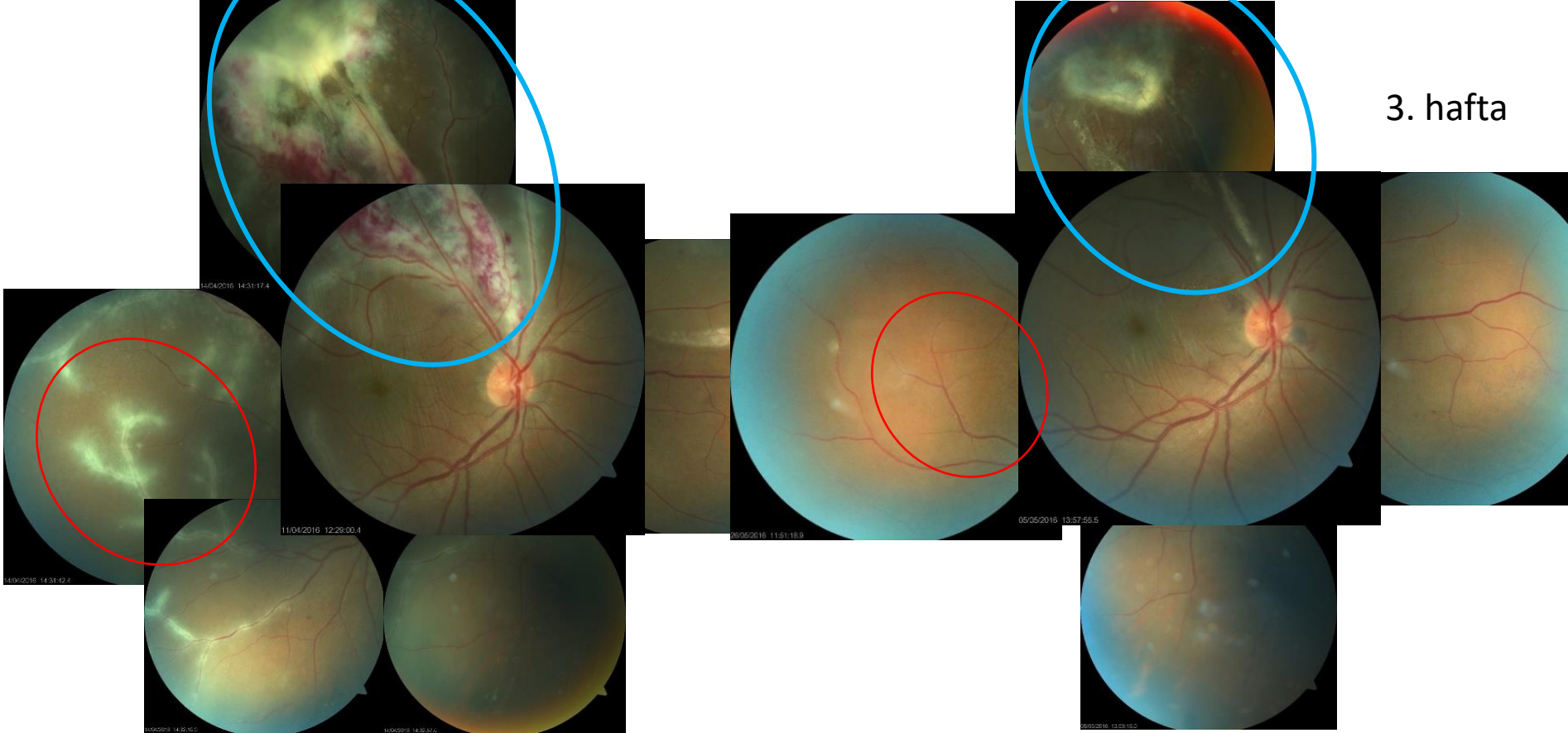
Valcyte + haftalık intravitreal foscarnet/ganciclovir sonrası

- 28 yaşında erkek hasta
- Bilinen hastalık yok
- Sağ görme azalması



HIV RNA: 1.5 milyon kopya

CD4+: 26 hüç/μL



3. hafta

3. hafta

40. gün

4. ay



Bir süredir sol görme azlığı +



HIV POZİTİF

CMV IgG NEGATİF



ÖN KAMARA PCR: CMV DNA POZİTİF



CMV IgG POZİTİF

TEDAVİ

- Gansiklovir (intravenöz, intravitreal)
- Valgansiklovir (oral)
- Foskarnet (intravenöz, intravitreal)
- Sidofovir (intravenöz, intravitreal)
- İntravenöz, oral, intravitreal
- Yüksek doz antiviral **indüksiyon**
 - Klinik cevaba göre 14-21 gün
- Sonrasında **idame** tedavi
 - CD4+ sayısı yükselene kadar

- Stewart, M.W. *Optimal management of cytomegalovirus retinitis in patients with AIDS. Clin. Ophthalmol.* 2010
- Martin, D.F. et al. *A controlled trial of valganciclovir as induction therapy for cytomegalovirus retinitis. N. Engl. J. Med.* 2002
- Jabs, D.A. et al. *Comparison of treatment regimens for cytomegalovirus retinitis in patients with AIDS in the era of highly active antiretroviral therapy. Ophthalmology* 2013

TEDAVİ KESME

- **CD4+ >100 hüç/μL**
- **CMV retiniti alanları skarlaşmış**
- **3-6 ay relapssız izlem**
- Bu hastaların yakın takibi önemli
 - ART başarısızlığı → CMV retinit reaktivasyonuna neden olabilir
- CDC ART öncesi CD4+ <50 hüç/μL olan hastalarda her 3-4 ayda bir rutin göz taraması öneriyordu. ART sonrası belirlenmiş kesin bir çizelge yok

- *Macdonald, J.C. et al. Highly active antiretroviral therapy-related immune recovery in AIDS patients with cytomegalovirus retinitis. Ophthalmology 2000*
- *Jabs, D.A, et al. Discontinuing anticytomegalovirus therapy in patients with immune reconstitution after combination antiretroviral therapy. Am. J. Ophthalmol. 1998*
- *Kaplan, J.E. et al. Centers for Disease Control and Prevention (CDC); National Institutes of Health; HIV Medicine Association of the Infectious Diseases Society of America. Guidelines for the prevention and treatment of opportunistic infections in HIV-infected adults and adolescents: recommendations from the Centers for Disease Control and Prevention, the National Institutes of Health, and the HIV Medicine Association of the Infectious Diseases Society of America. MMWR Recomm. Rep. 2019*

HIV -SİFİLİZ

- **BÜYÜK TAKLİTÇİ**
- HIV + → 86 kat ↑ risk
- Erkek : kadın → % 9.5-1.5 → MSM
- Artmış plazma HIV yükü / azalmış CD4 hücre sayısı ile ilişkili
- **Sifiliz tanısı konan her hasta HIV açısından taramalı**
 - HIV + hastaların Sy yakalanması daha muhtemel
 - Eş zamanlı HIV sifiliz progresyonunu hızlandırır
- HAART tedavisi almayan Sy hastalarında bilateral hastalık ve posterior tutulum gelişim ihtimali daha yüksektir.

- *Larsen SA, et al. Laboratory diagnosis and interpretation of tests for syphilis. Clin Microbiol Rev. 1995*
- *Lee SY, et al. Clinical and laboratory characteristics of ocular syphilis: a new face in the era of HIV co-infection. J Ophthalmic Inflamm Infect. 2015*
- *Balba GP, et al. Ocular Syphilis in HIV-Positive patients receiving highly active antiretroviral therapy. Am J Med. 2006*

Spectrum of ocular involvement in syphilis.

Ocular structure	Type of lesion/involvement	
Eyelid	Chancre	
	Gumma	
	Tarsitis	
	Ulcerative blepharitis	
Conjunctiva	Chancre	
	Conjunctivitis	
Orbit	Tarsitis	
	Periostitis	
Cornea	Gumma (extraocular muscle, lacrimal gland or within orbit)	
	Interstitial keratitis	
	Ulcers	
	Deep punctate keratitis	
	Keratitis profunda	
	Keratitis punctate profunda	
	Keratitis pustuliformis profunda	
Sclera	Keratitis linearis migrans	
	Episcleritis	
	Scleritis	
	Gumma	
Iris and ciliary body	Roseolae	
	Papules	
	Gumma	
Pupil	Argyll Robertson Pupil	
Lens	Capsular rupture and necrotizing cortical inflammation	
	Traumatic dislocation	
Glaucoma	Secondary glaucoma	
	Perineuritis	
Optic nerve	Anterior optic neuritis	
	Retrobulbar neuritis	
	Neuroretinitis	
	Papilloedema	
	Optic atrophy	
	Motility dysfunctions	Oculomotor, abducens, trochlear associated paresis
		Basilar meningitis
Periodic alternating nystagmus		
Retina and vitreous	Chorioretinitis	
	Necrotizing retinitis	
	Retinal vasculitis	
	Central retinal artery/vein occlusion	
	Vitritis	
	Exudative retinal detachment	

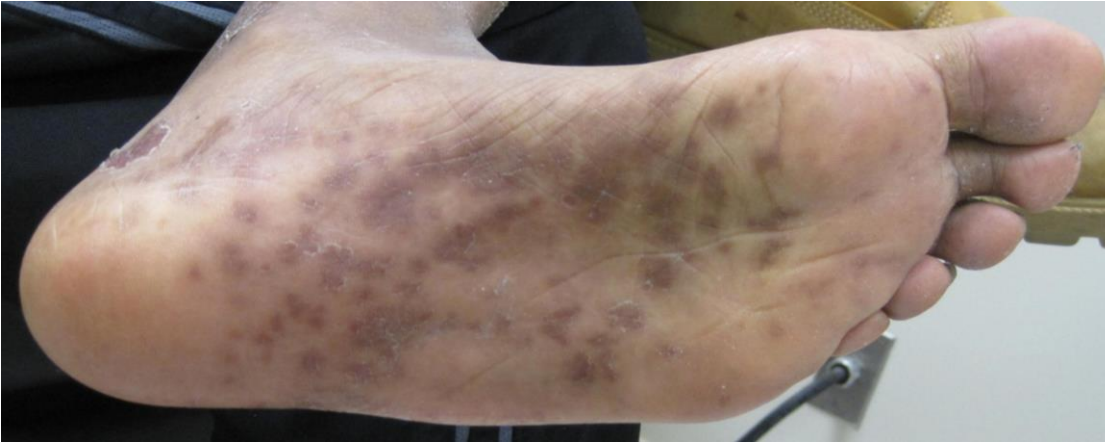
HIV -SİFİLİZ

- **Vitritin eşlik ettiği korioretinit en sık**
- Tipik olarak arka kutup ve midperiferi tutar
- Lezyonlar başlangıçta küçüktür sonra büyüyüp birleşerek genişler.
- Retina ve koroidin tutulması genellikle **sekonder sifiliz** evresinde
- **Olguların yarısı bilateral tutulum gösterir**

Non-spesifik halsizlik atakları ve döküntü



- 52 yaş erkek
- 1.5 haftadır, gözde kızarıklık, ağrı, bulanık görme
- 4 yıl önce HIV tanısı
 - HAART başlanmış ancak ilacı ve takibi bırakmış
 - CD4: 178



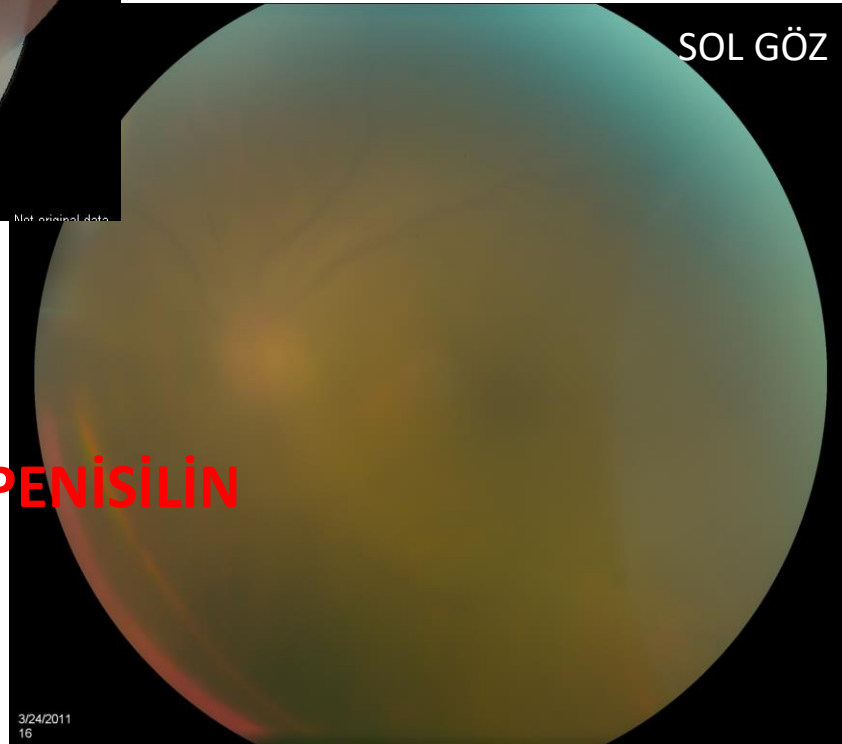
SAĞ GÖZ



3/24/2011

Net original data

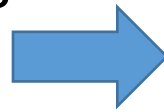
SOL GÖZ



3/24/2011
16

RPR Reaktif 1:2048

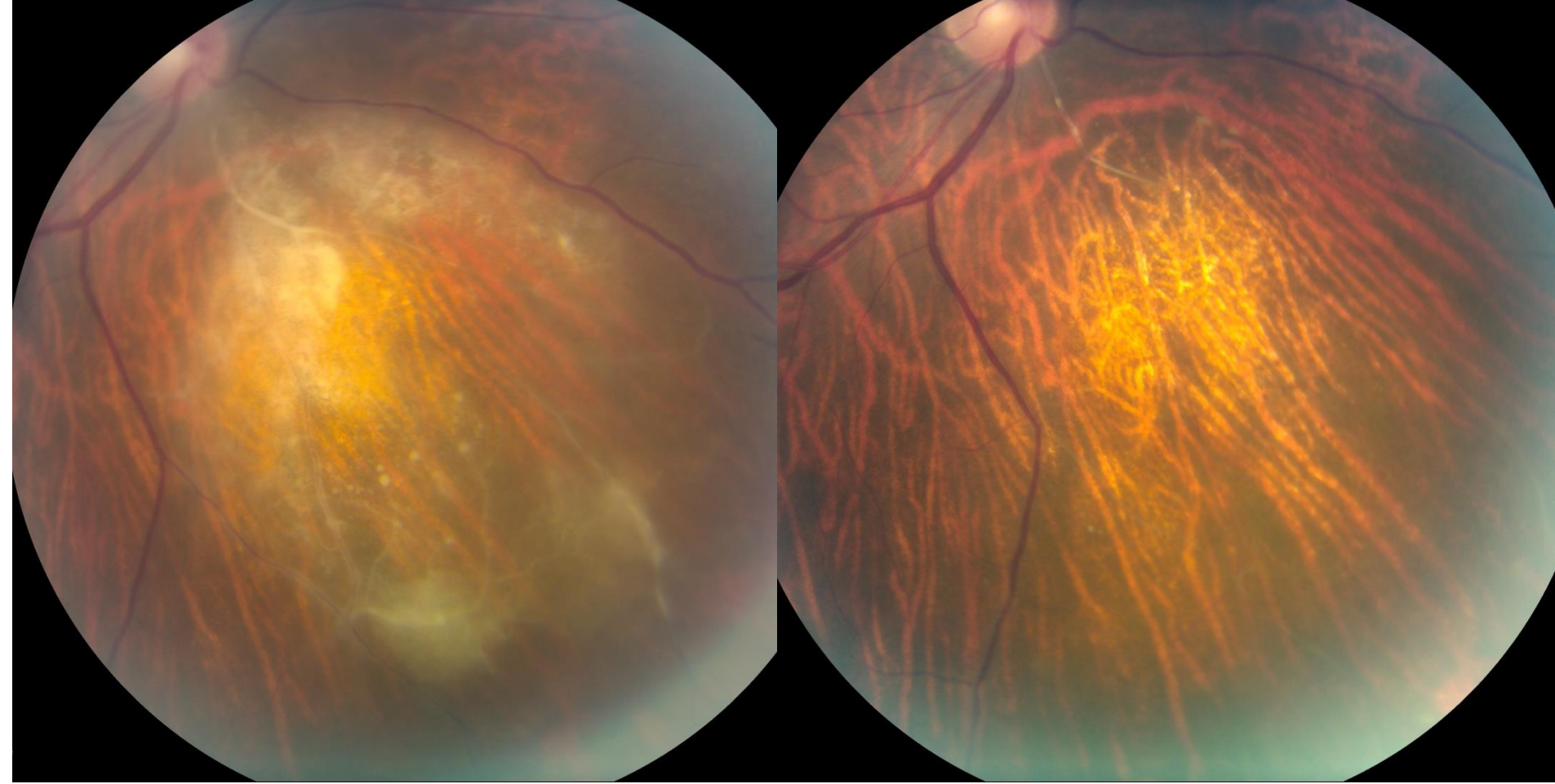
Sy IgG >> Pozitif



KRİSTALİZE PENİSİLİN

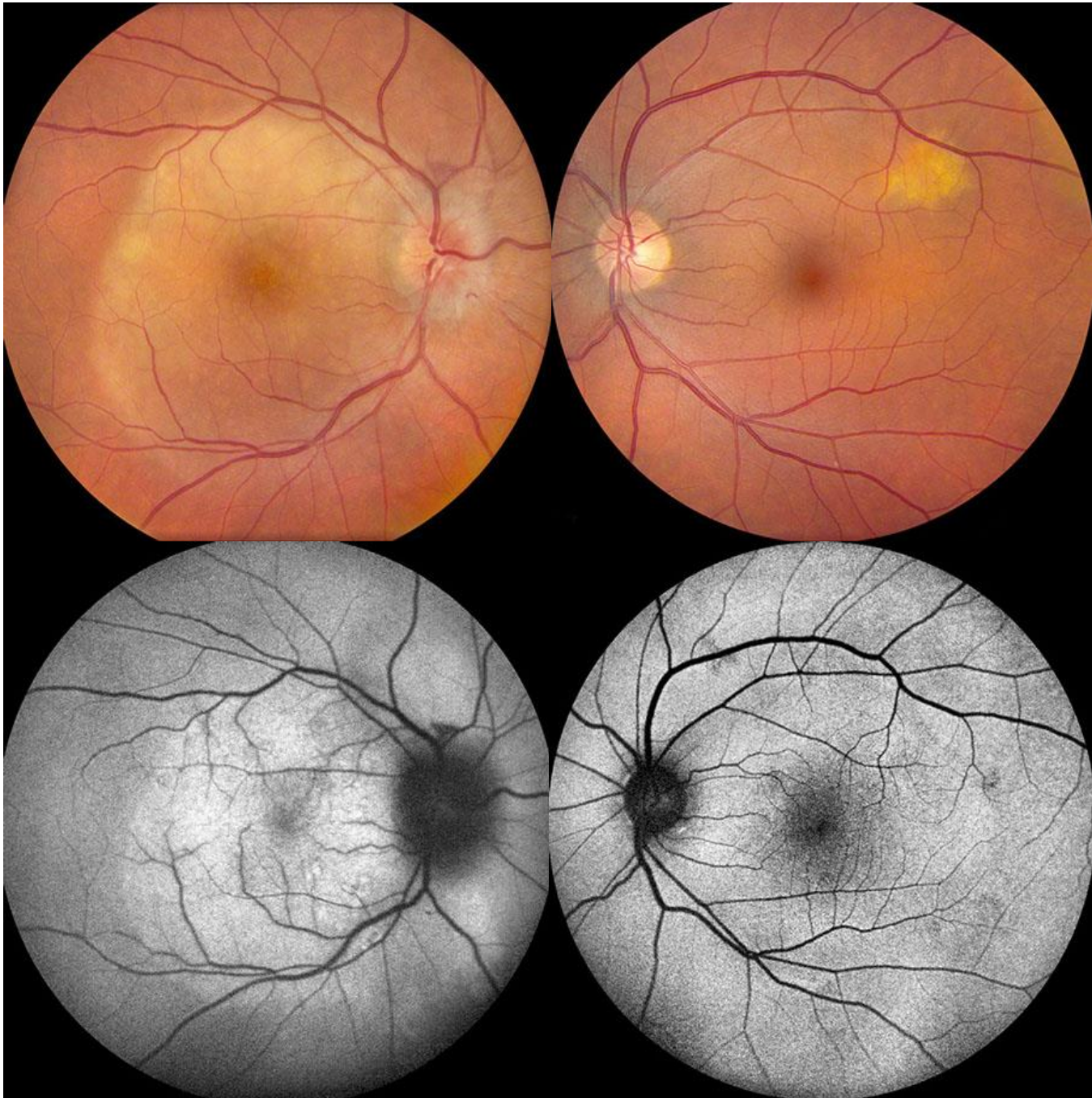
TEDAVİ ÖNCESİ

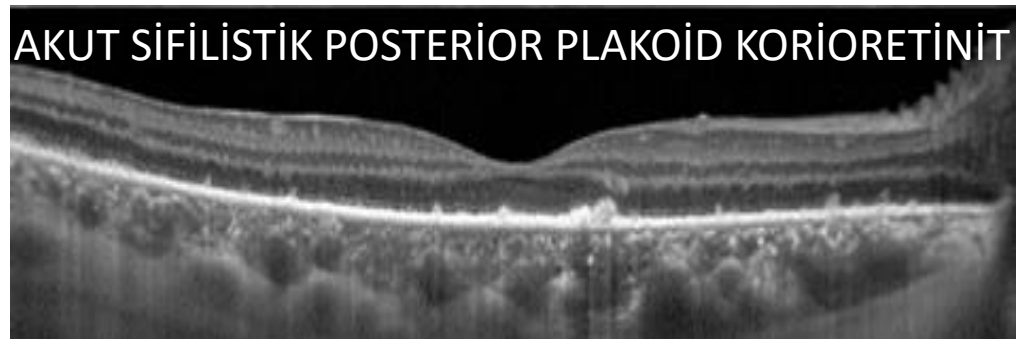
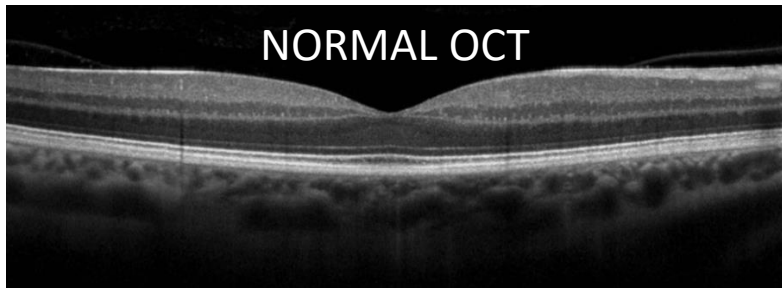
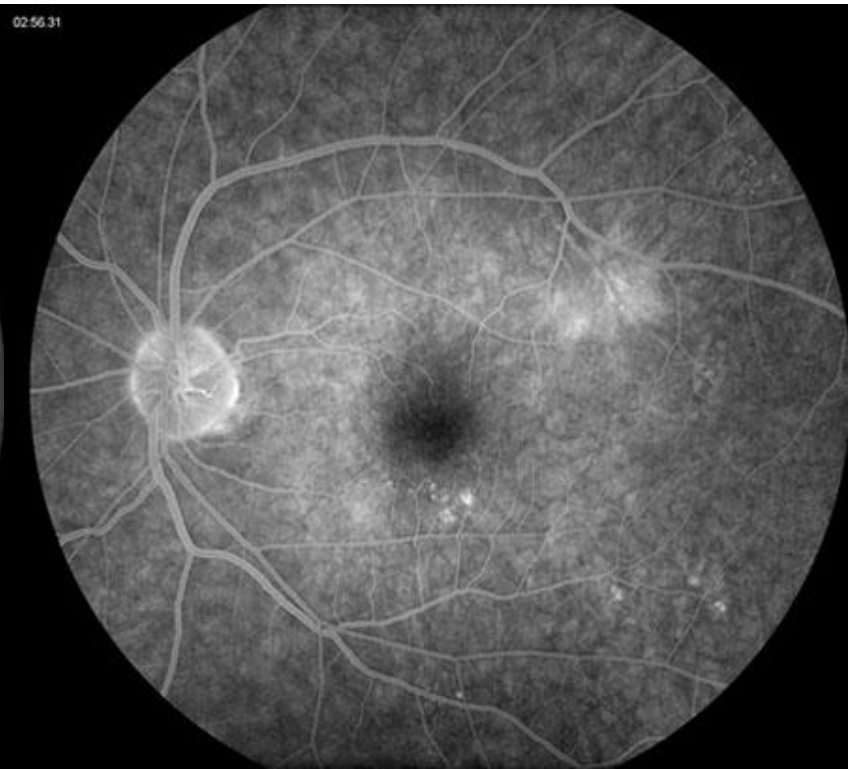
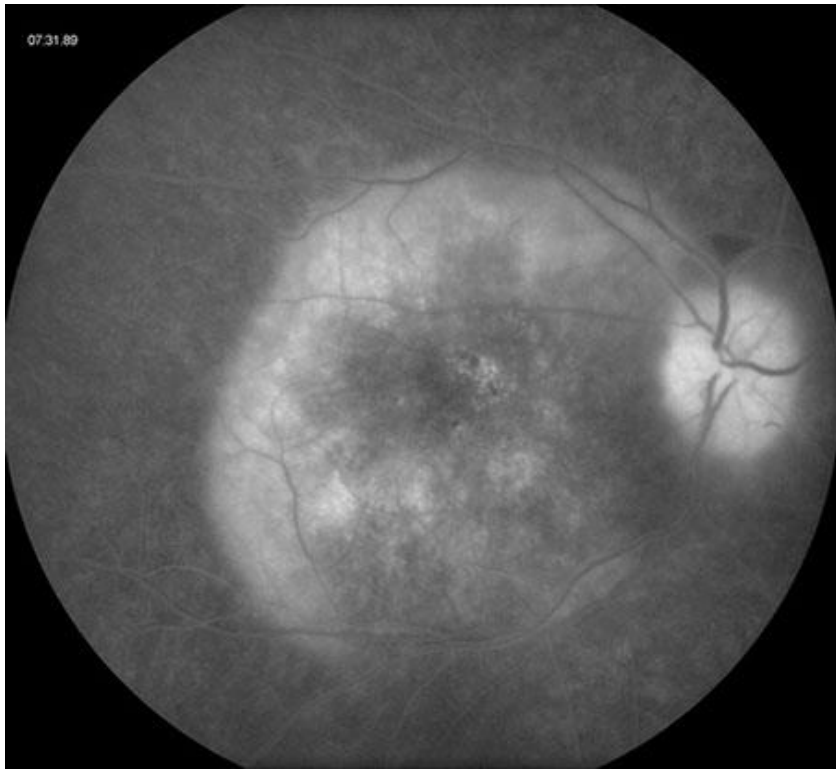
PENİSİLİN TDV SONRASI



AKUT SİFİLİSTİK POSTERİOR PLAKOİD KORİORETİNİT

- Nadir
- Sekonder sifiliz hastalarında tanımlanmıştır
- **Tipik olarak arka kutupta veya yakınındadır**
- Bir veya daha fazla **sarımsı plakoid şekilde dış retinal**
lezyonlardır

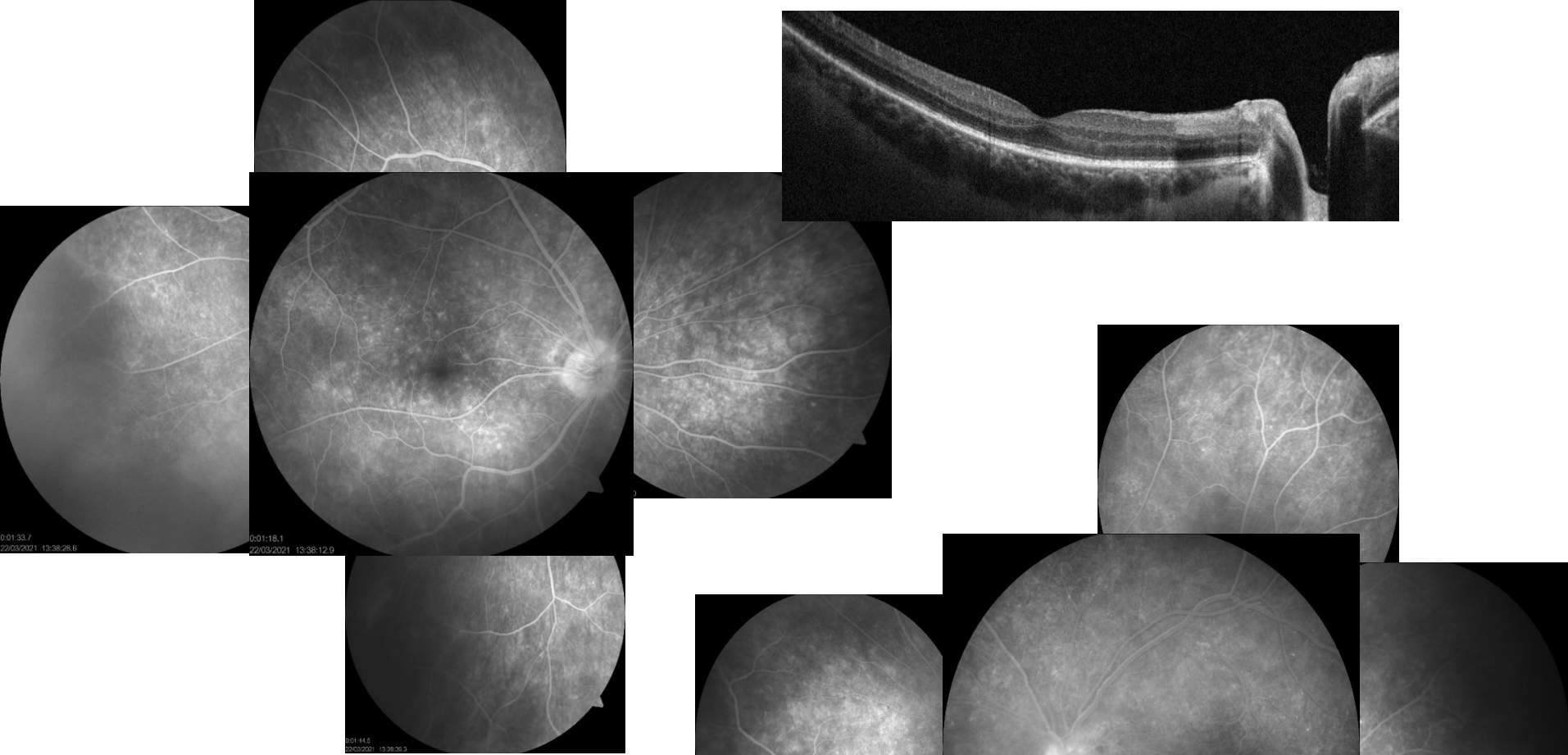






- 25 YAŞINDA ERKEK
- SOL PUSLU GÖRME
- 1 HAFTADIR

Takipli HIV hastası
CD4+: 783

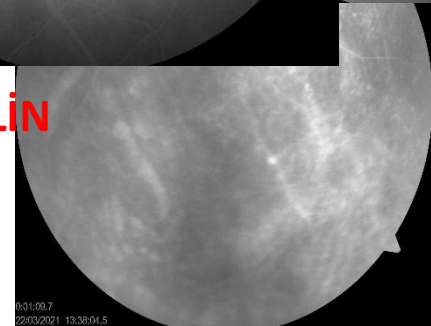


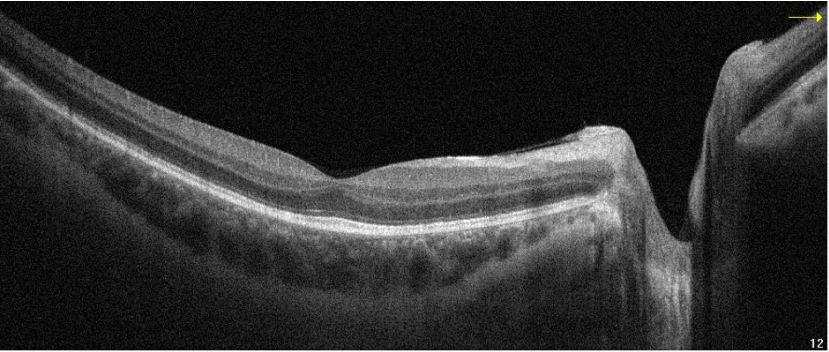
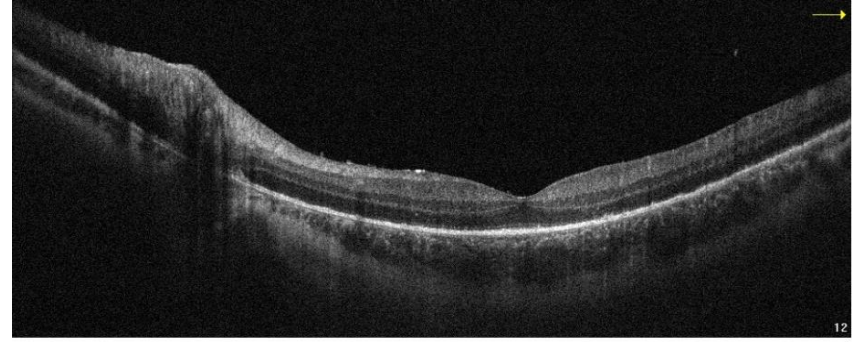
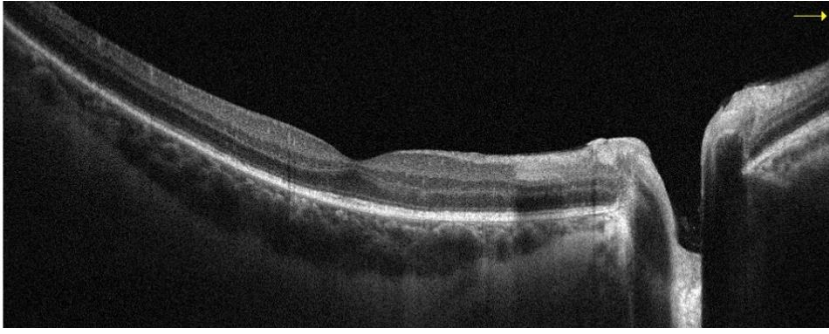
VDRL: NEGATİF

VDRL: 1/32 POZİTİF
TPHA: POZİTİF >> 1/320
SİFİLİS IgG: POZİTİF

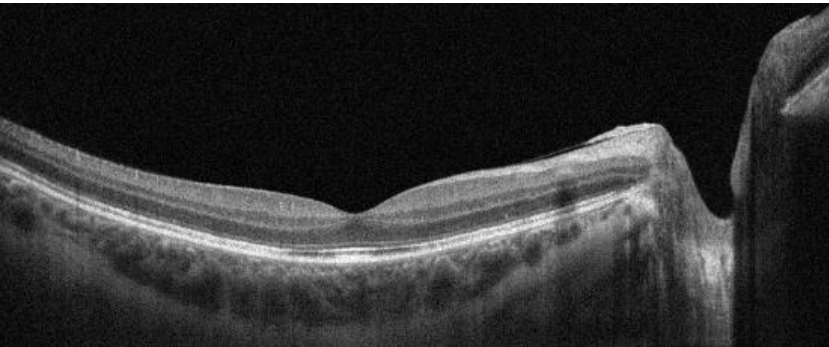
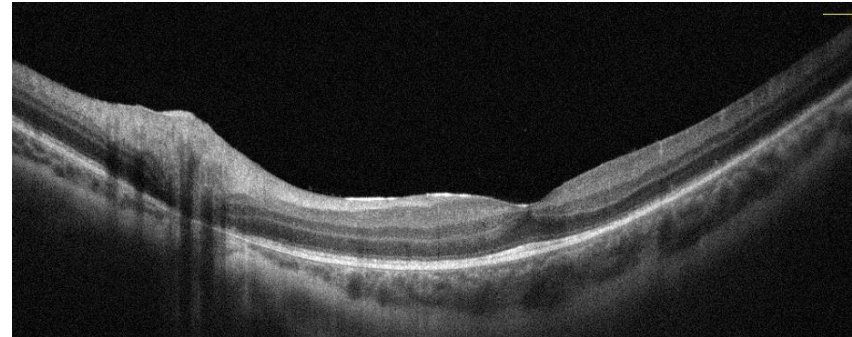


İV KRİSTALİZE PENİSİLİN

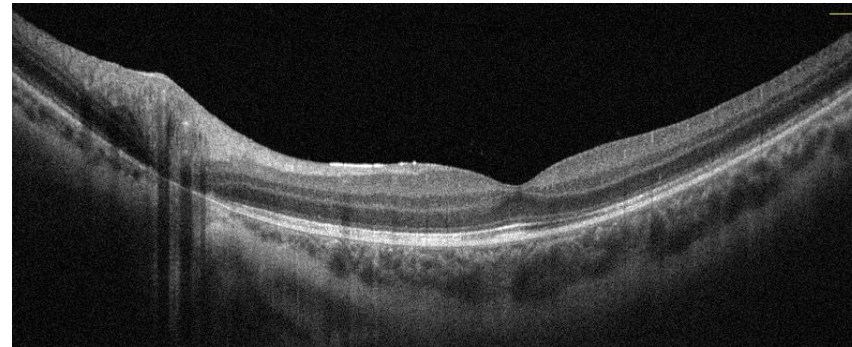




1. ay



3. ay



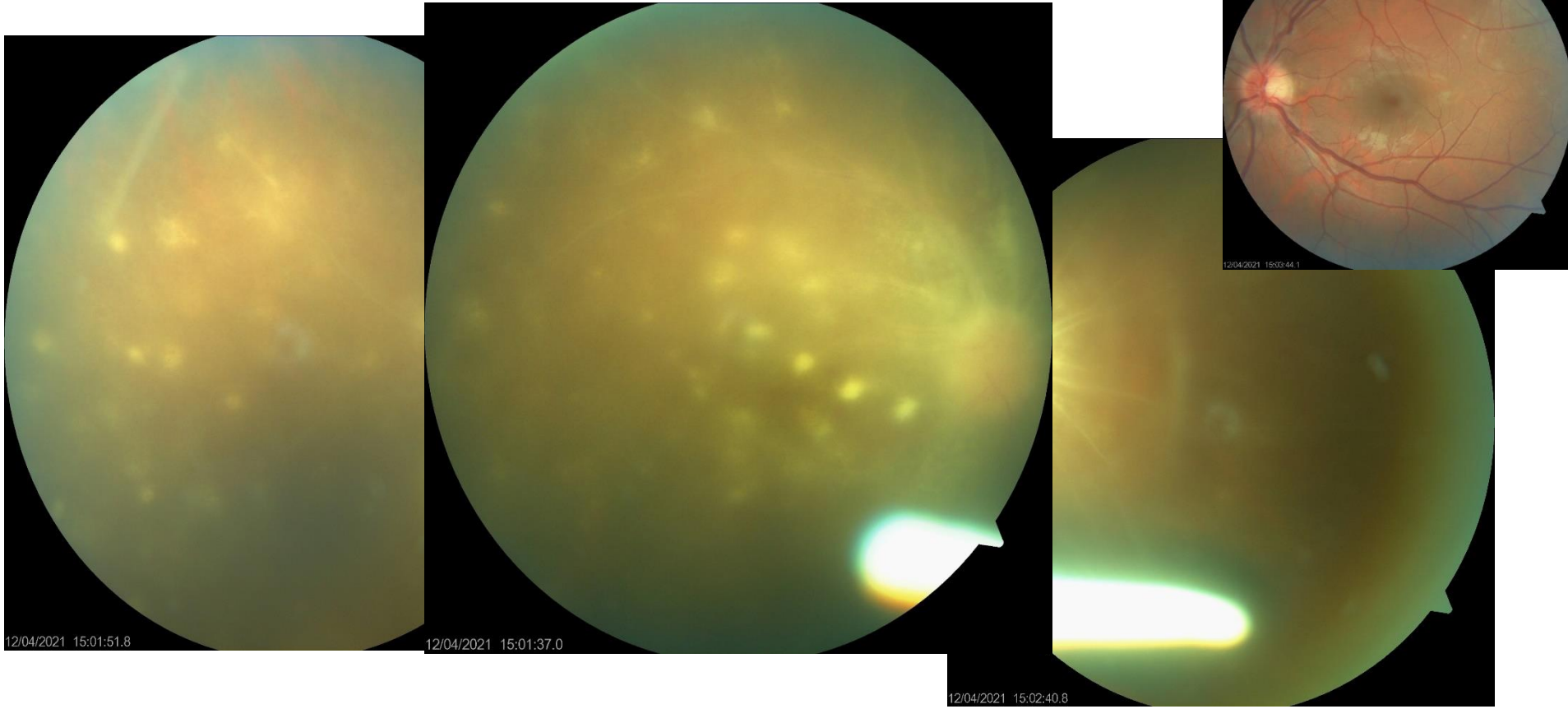
YALANCI NEGATİFLİK

- HIV koenfekte bireylerde **yalancı negatif sonuçlar bildirilmiştir.**
 - PROZON fenomen
 - Erken hastalık
 - Test hatası

MULTİPLE SÜPERFİSİAL PRERETİNAL AGREGATLAR

- İnflamatuar bir alan üzerinde **multiple süperfisial preretinal agregatlar**
- İyi sınırlı sarımsı beyaz lezyonlar
- Tedavi edilmezse büyüme gösterirler. Tedavi ile de hızlıca gerileme gösterirler
- Bu presipitatların retinanın içinde veya yüzeyinde treponemal bakteri ve inflammatuar hücrelerin birleşiminden oluştuğu düşünülmektedir

- Kuo A, et al. *The Great Imitator: ocular Syphilis Presenting as Posterior Uveitis. Am J Case Rep* 2015
- Yang P, et al. *Ocular manifestations of syphilitic uveitis in Chinese patients. Retina.* 2012
- Rodrigues RAM, et al. *Yellowish dots in the retina: a finding of ocular syphilis? Arq Bras Oftalmol.* 2014
- Reddy S, et al. *Syphilitic retinitis with focal inflammatory accumulations. Ophthalmic Surgery, Lasers Imaging Off J Int Soc Imaging Eye.* 2006



- SAĞ GÖZDE 1 AY ÖNCE BAŞLAYAN AZ GÖRME
- TESTİS CA ÖYKÜSÜ +, BEHÇET TANISI İLE İMURAN VE KOLŞİSİN KULLANIYOR
- DIŞ MERKEZDE SAĞ GÖZE DEXEMATAZON İMP

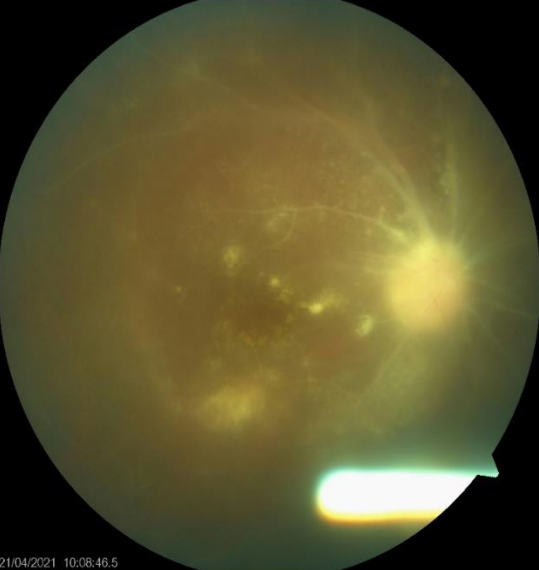
VDRL +
SİLİS IgG +



HIV TANISI
CD4: 561

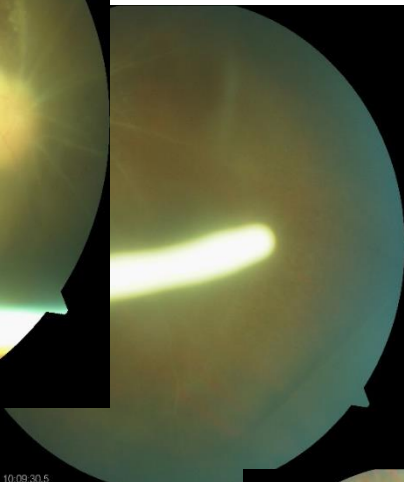


PENİSİLİN ALLERJİSİ
SEFTRİAKSON TDV 3 HAFTA

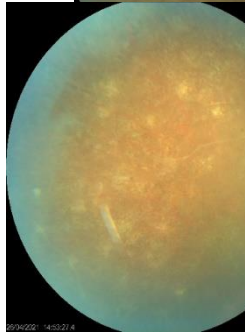
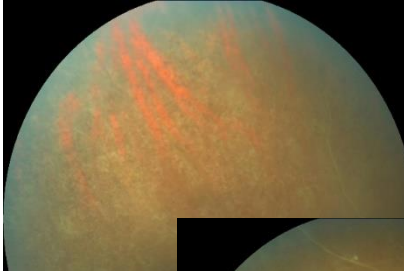


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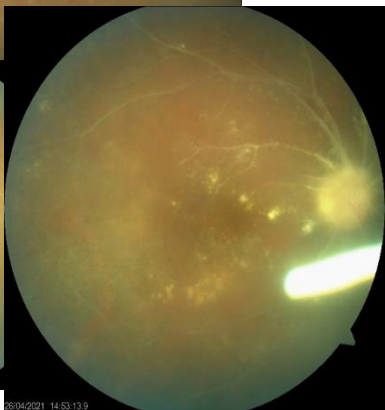
9. GÜN



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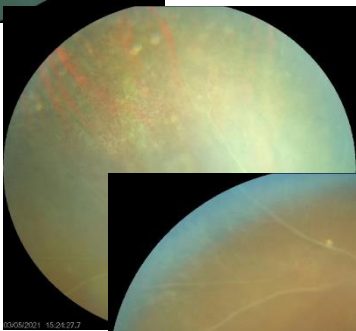


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26/04/2021 14:53:35.2

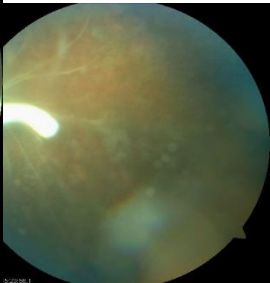
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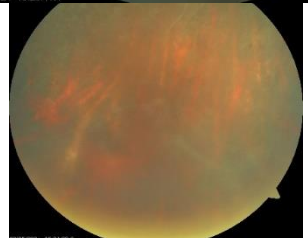
29/04/2021 15:24:27.7



13/05/2021 15:23:41.1



13/05/2021 15:23:41.1



21. GÜN

TANI

- Sifilitik posterior üveit tanısı; **linik şüphe ve serolojik testlerle** doğrulama sonrasında konur.
- Destekleyici görüntüleme yöntemleri gerektiğinde kullanılır
- Güncel tarama testleri CDC nin önerilerine göre treponemal antikor tespit eden enzim immunoeseş (EIA) ve kemiluminesent immunoeseş (CIA) yöntemleridir.
- Pozitif sonuç varlığında non treponemal test ve RPR

TEDAVI

Recommended regimens for the treatment of syphilis (CDC guideline, 2015)⁶⁴.

Stages of syphilis	Recommended regimen for adults
Primary and secondary syphilis	Benzathine penicillin G 2.4 million units IM in a single dose
Early latent syphilis	Benzathine penicillin G 2.4 million units IM in a single dose
Late latent syphilis	Benzathine penicillin G 7.2 million units, administered as 3 doses of 2.4 million units IM/week
Tertiary syphilis with normal CSF examination	Benzathine penicillin G 7.2 million units, administered as 3 doses of 2.4 million units IM/week
Neurosyphilis and ocular syphilis	<u>Aqueous crystalline penicillin G 18–24 million units/day, administered as 3–4 million units IV every 4 hours or continuous infusion for 10–14 days</u> <i>Alternative Regimen:</i> Procaine penicillin G 2.4 million units IM/day PLUS Probenecid 500 mg orally four times a day, both for 10–14 day

- Sexually transmitted diseases treatment guidelines. MMWR Morb Mortal Wkly Rep 2015
- Jay CA. Treatment of neurosyphilis. Curr Treat Options Neurol. 2006

HIV - TÜBERKÜLOZ

- BİR DİĞER BÜYÜK TAKLİTÇİ
- HIV + TB >> aktif TB gelişme riski 10 kat
- Özellikle CD4 sayısı <200
- HIV- aktif TB birlikteliğinin oküler tüberküloz prevalans ve insidansında artışa neden olup olmadığı net değil
- Klinik: **granülomatöz üveit** >> koroidal granülom, subretinal abse, intermediete üveit, panüveit, vaskülit, daha nadiren konjktiva, kornea tutulumu görülebilir
- **Genellikle tutulum posteriordur, ciddidir ve dissemine hastalık ile ilişkilidir**
- **Tanı primer olarak klinik bulgulardan şüphe ve diğer organ tutulumlarının araştırılmasına ihtiyaç duyar**

HIV +

ATEŞ : geceleri 38.2

CRP:297

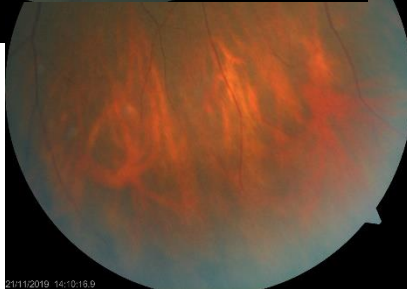
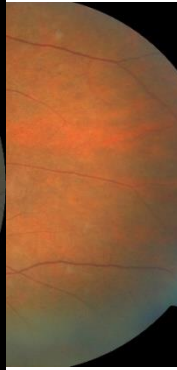
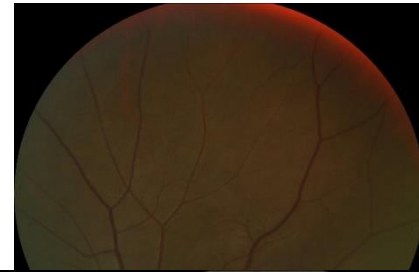
CD4:36.75

SİFİLİZ IgG: NEGATİF

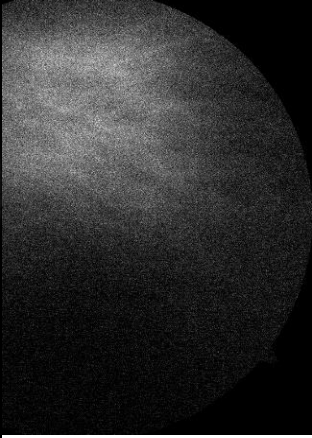
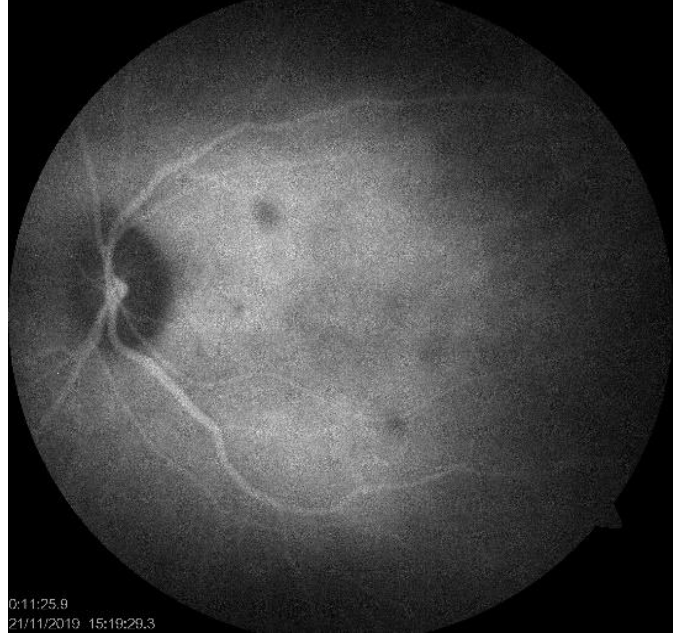
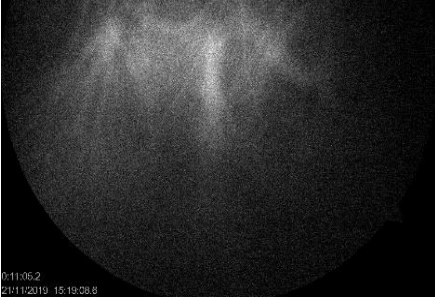
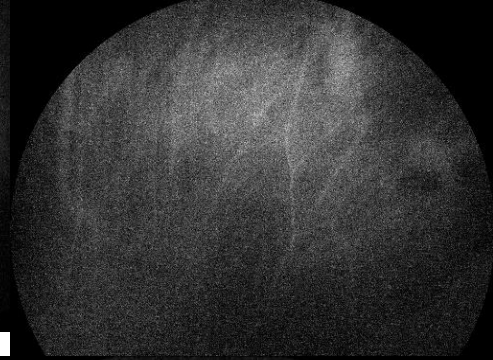
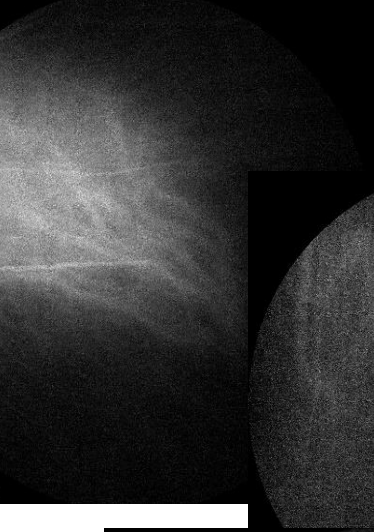
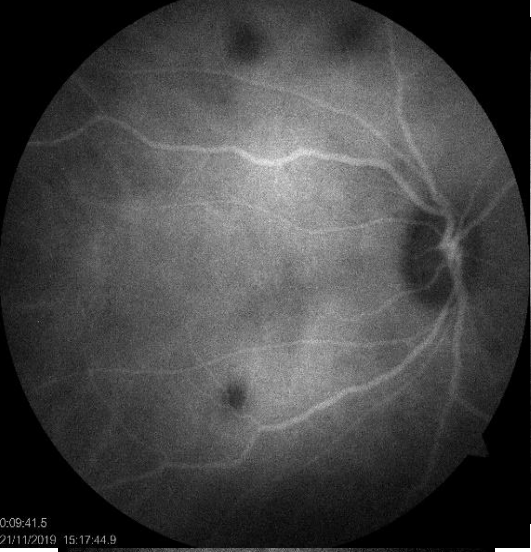
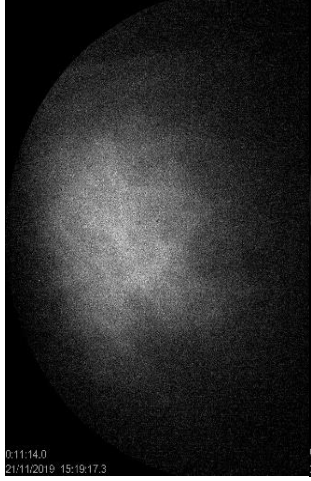
CMV PCR: 894 kopya/ml

ARB: NEGATİF

PERİPORTAL LAP +



İNDOSİYANİN YEŞİLİ ANJİOGRAFI

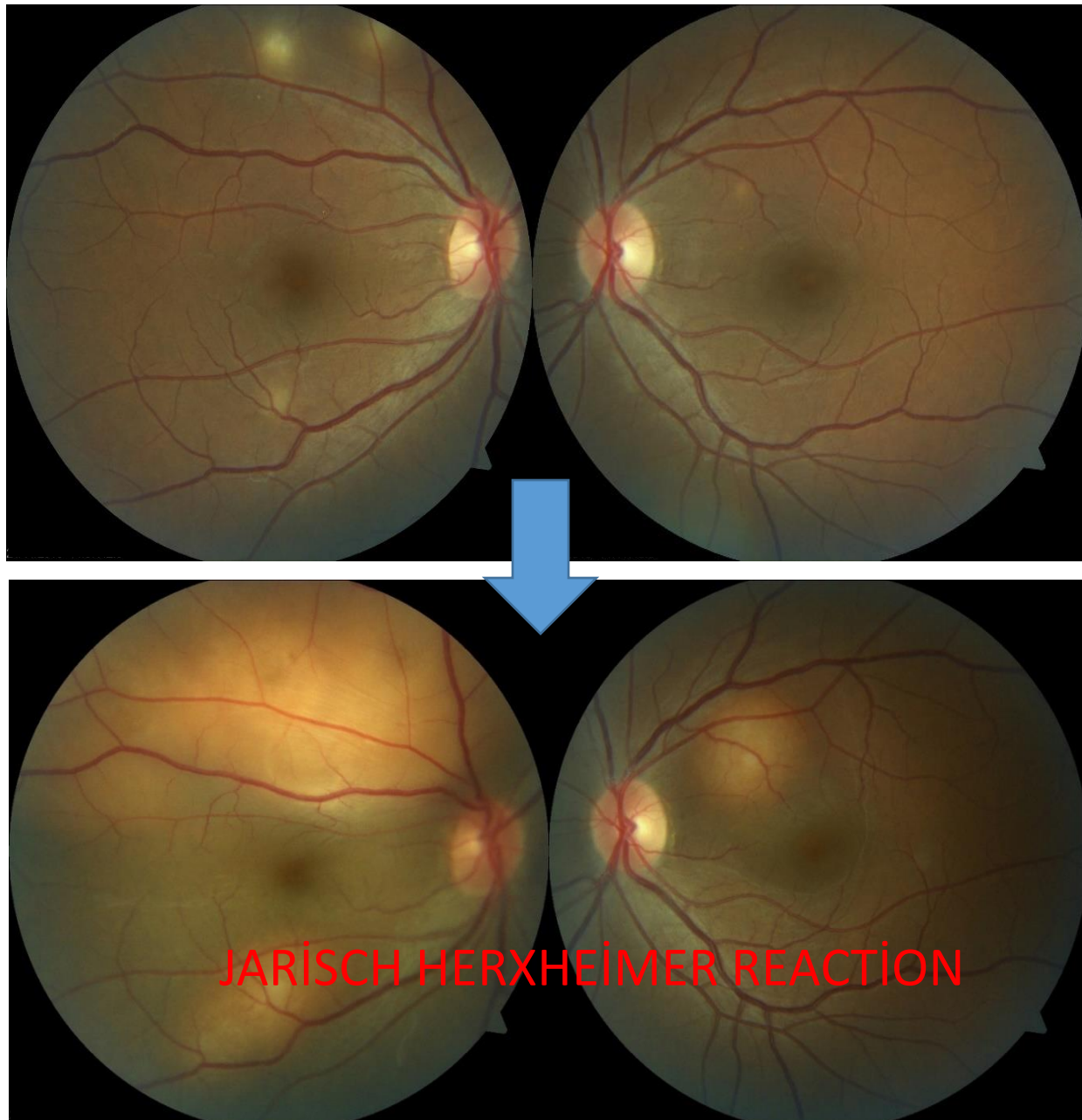


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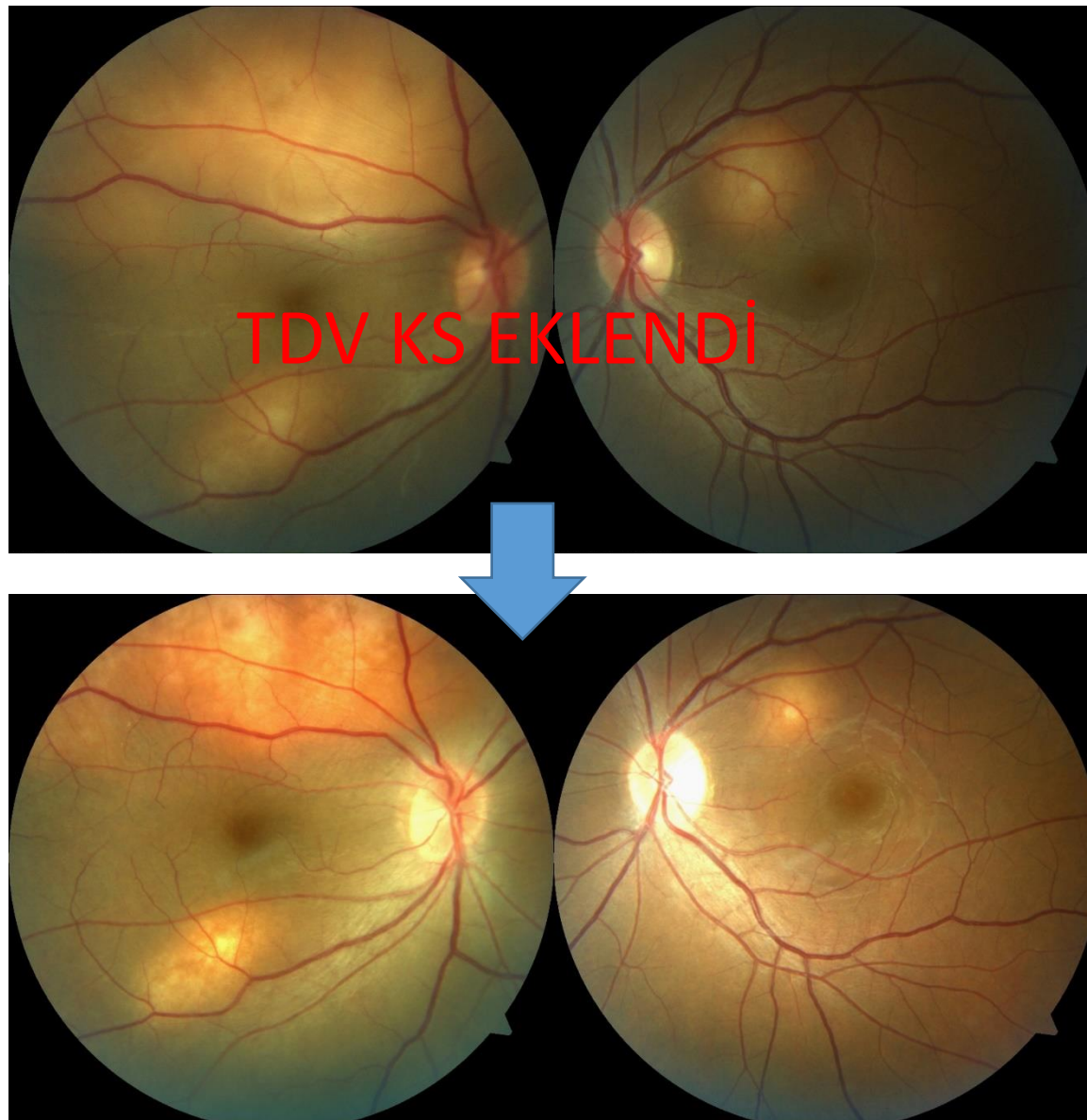
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0:11:06.2
21/11/2019 15:19:38.8

0:11:25.9
21/11/2019 15:19:29.3



- *Yilmaz T, et al. (2015) Choroidal tuberculoma showing paradoxical worsening in a patient with miliary TB. Ocul Immunol Inflamm*
- *Basu S, et al. (2013) Progressive ocular inflammation following anti tubercular therapy for presumed ocular tuberculosis in a high endemic setting. Eye (Lond)*
- *Ganesh SK, et a.l (2017) Paradoxical worsening of a case of TB subretinal abscess with serpiginous-like choroiditis following the initiation of antitubercular therapy. Indian J Ophthalmol*

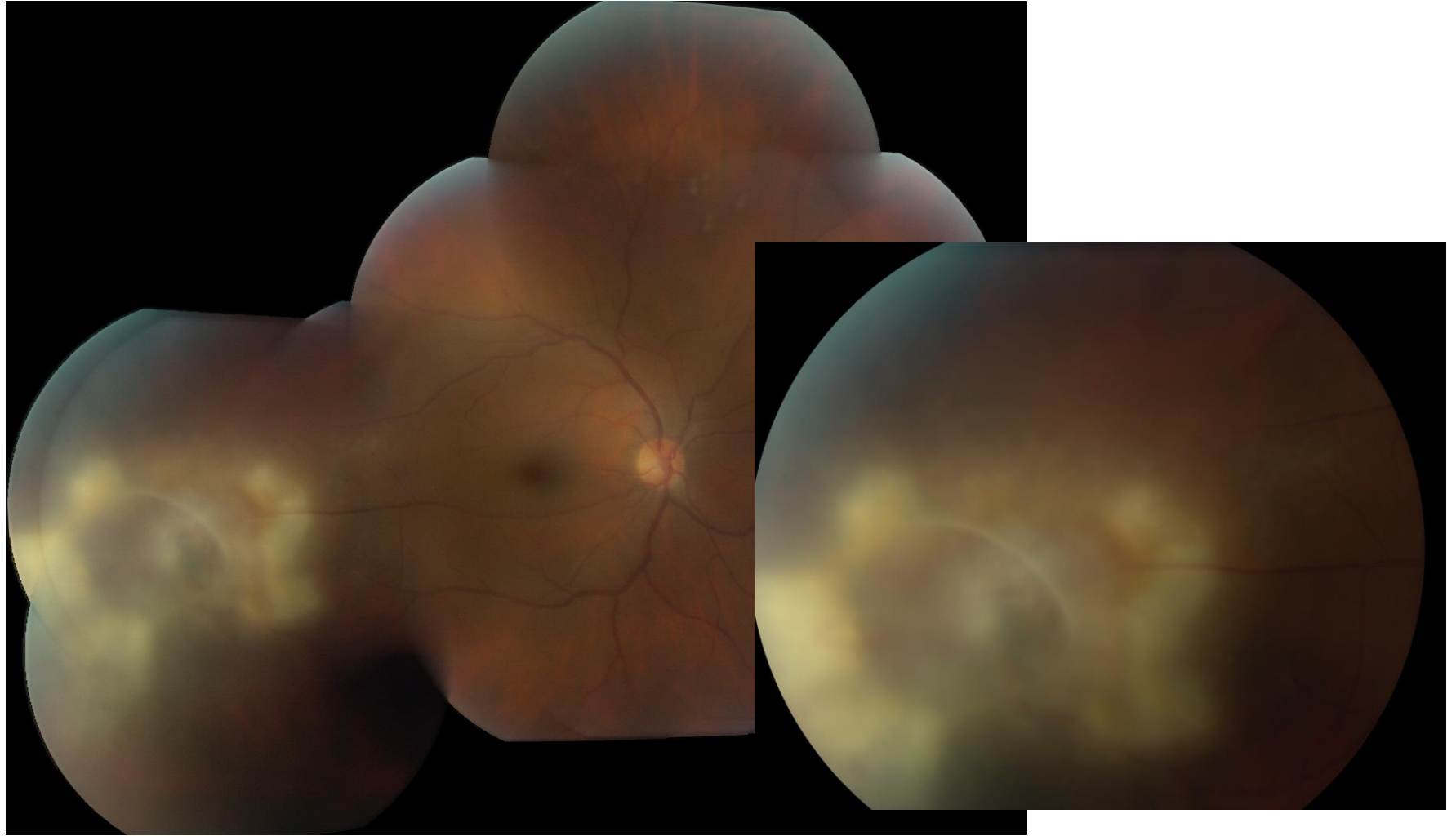


- *Yilmaz T, et al. (2015) Choroidal tuberculoma showing paradoxical worsening in a patient with miliary TB. Ocul Immunol Inflamm*
- *Basu S, et al. (2013) Progressive ocular inflammation following anti tubercular therapy for presumed ocular tuberculosis in a high endemic setting. Eye (Lond)*
- *Ganesh SK, et a.l (2017) Paradoxical worsening of a case of TB subretinal abscess with serpiginous-like choroiditis following the initiation of antitubercular therapy. Indian J Ophthalmol*

HIV TOXOPLAZMA

- HIV negatif bireylerle karşılaştırıldığında insidans daha yüksek
- Retinal lezyonlar CMV retinitine benzer ancak retinal hemoraji alanları daha azdır ve belirgin vitreus inflamasyonu tabloya eşlik eder
- HIV + bireylerde toxoplazma genellikle bilateral ve multifokal bir tutulum gösterir.
- HIV + bireylerde eski skar daha az sıklıkta görülür
- Tedavi edilmezse fulminan forma dönüşmeye daha meyillidir
- MSS tutulumu eşlik edebilir
- Standart antitokso tedavi uygulanır





TEDAVİ ÖNCESİ



TEDAVİ SONRASI

SONUÇ

- HIV pozitif bireylerde aksi ispat edilene kadar görme ile ilgili tüm patolojiler fırsatçı enfeksiyon olarak değerlendirilmeli
- Hastaya steroid başlanmadan önce sifiliz kontrolü
- Yalancı negatiflikler olabileceği akılda tutulmalı

TEŐEKKÖR EDERİM