

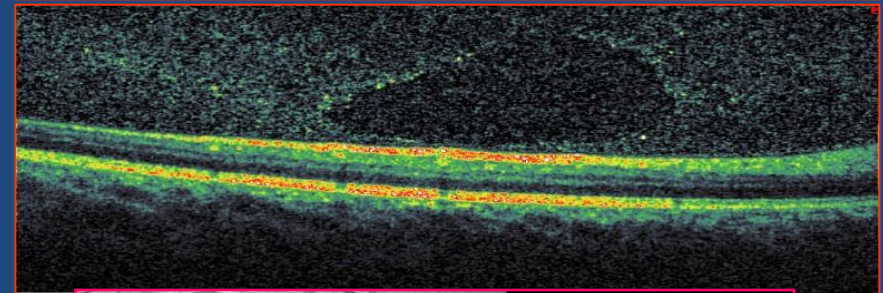
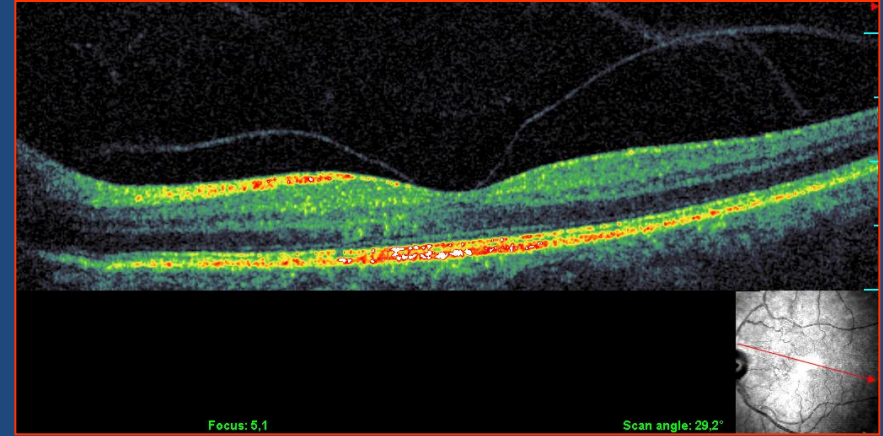
EPIRETİNAL MEMBRAN
VİTREOMAKÜLER TRAKSİYON
MAKÜLER HOLE:
OCT BULGULARI
TEDAVİYE KATKISI

Prof. Dr. Emin ÖZMERT
AÜ Tıp Fakültesi Göz Hastalıkları ABD

ERM & VMT

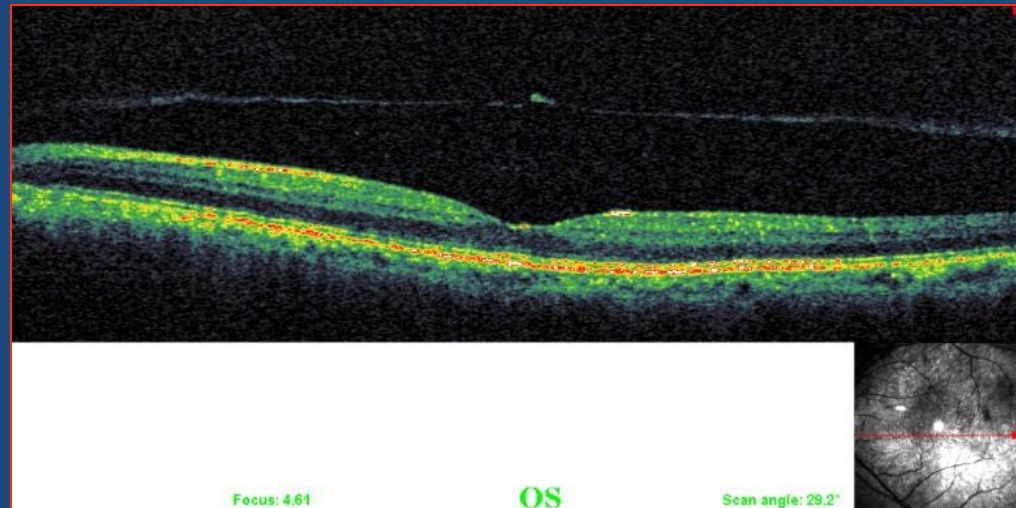
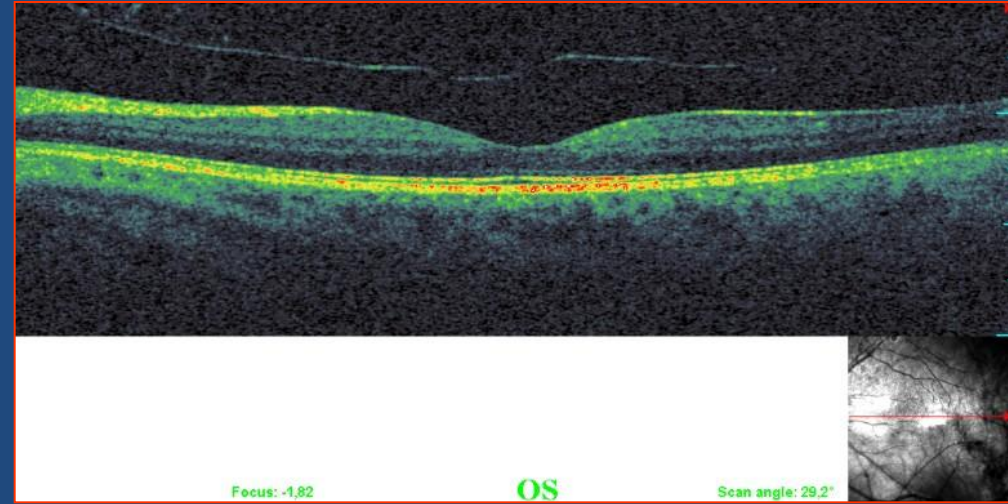
Patoloji-1

- Premaküler vitreus cepi (Bursa)
- Makülaya mikrotraksiyonlar -----
İLM defekti
- Arka vitreus korteksinin yarılması
(vitreoskizis) ----- PVD
Kortikal vitreus artıklarının makülada kalması, çoğalma zemini
- Retinadan çıkan glia hücrelerinin
(fibröz astrosit, Müller) çoğalması.
ERM' da RPE hücresi daha çok
- İLM üstünde avasküler, fibroselüler kontraktıl membran
- **ERM:** Kısmi / tam PVD (+)
% 10 – 25 PVD (-)
- **VMT:** İnkomplet PVD (+)



ARKA VİTREUS DEKOLMANI

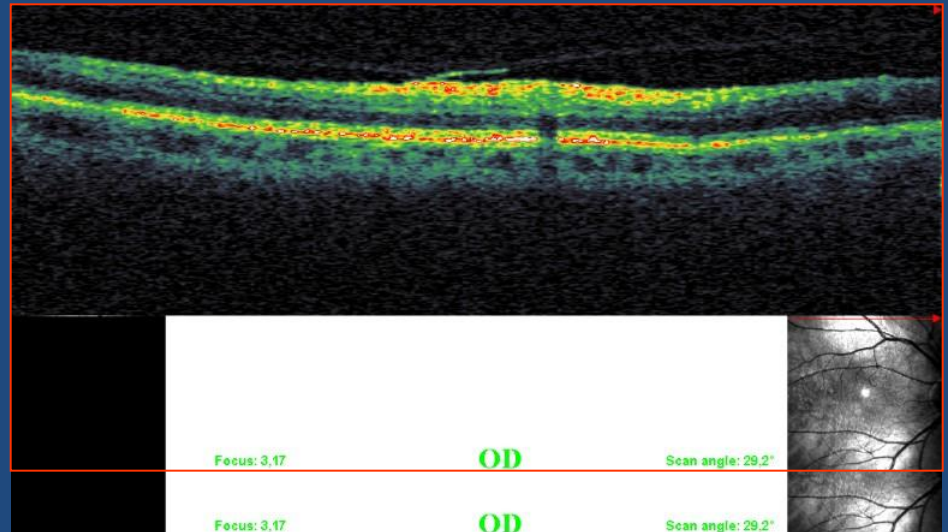
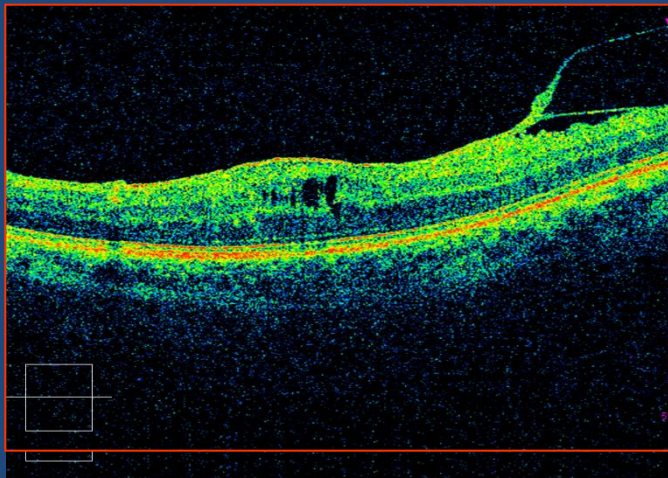
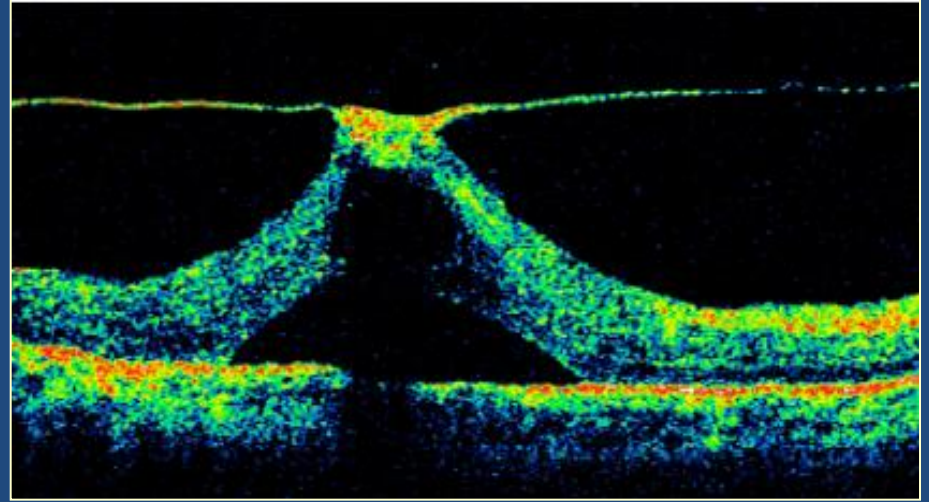
- İnce, zayıf, kesikli yansıma
- Tam PVD olunca iç retinadan uzaklaşma
- Alet sınırlılığına bağlı olarak OCT' de görülememe (% 8.6)
- Saptamak için USG kullanılabilir
- Biomikroskopide PVD görülmezken, OCT veya USG' de görülebilir (% 37.5)



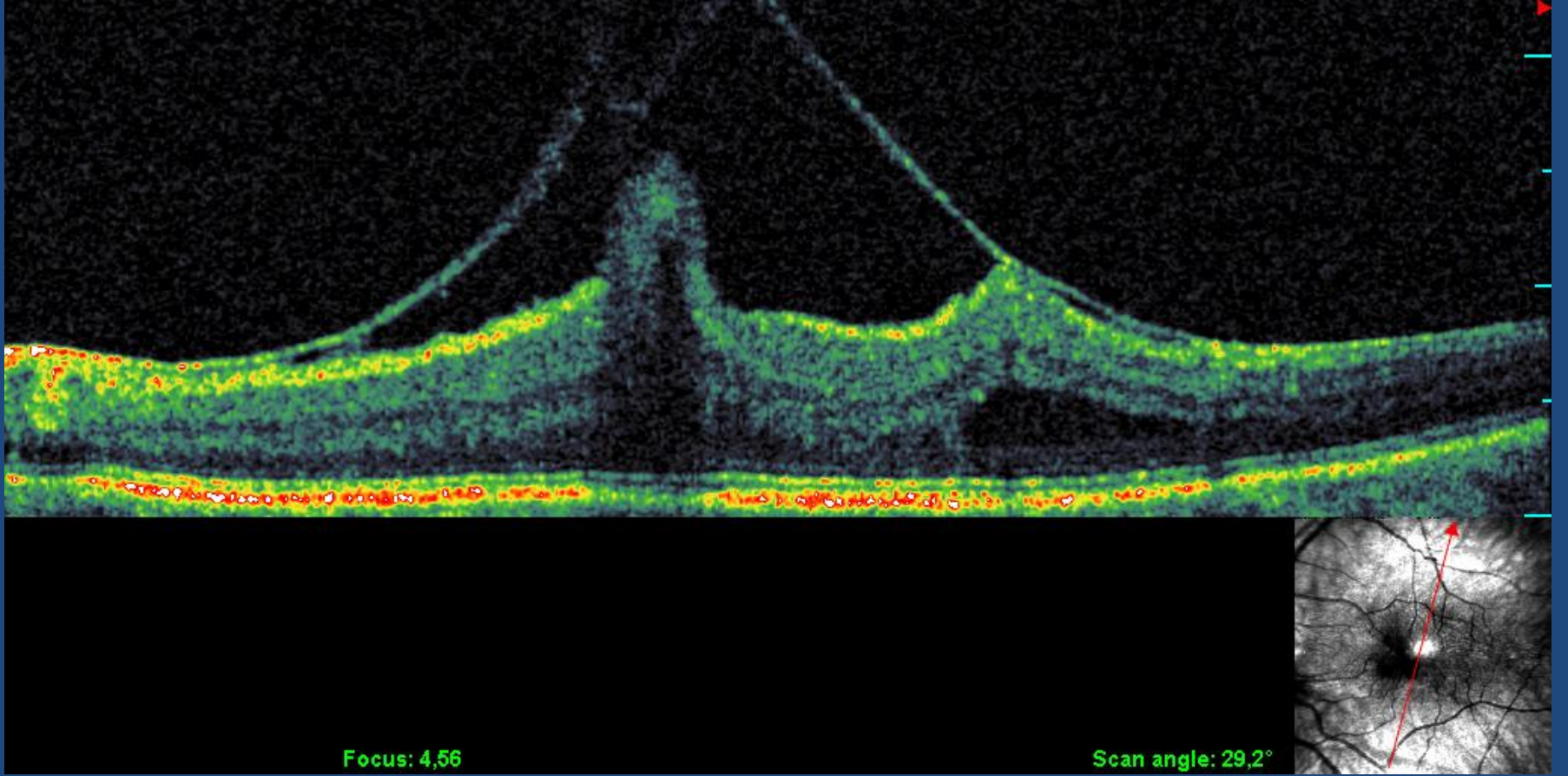
ERM & VMT

Patoloji-2

- Hücrelerin maküla üstünde çoğalması, kısmi dekole arka hiyaloid yüzde de ilerlemesi
- Düşük yansıtıcı bölgelerle komşu kalın hiperreflektif plakoid zonlar
- ERM / vitreus yapışıklığının kuvvetlenmesi
- **Cerrahi endikasyonu**

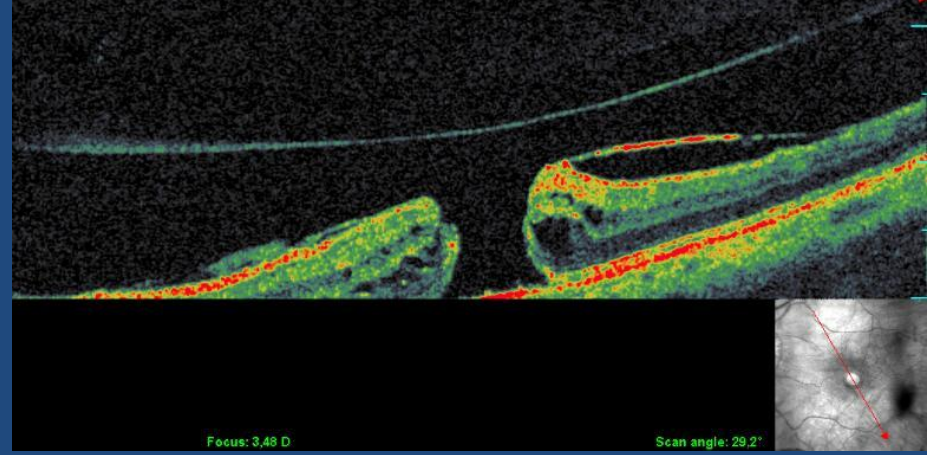


ÖN – ARKA TRAKSİYON



Dış nükleer – dış pleksiform tabakalarda ayrılma
Aralarda Müller Hücreleri

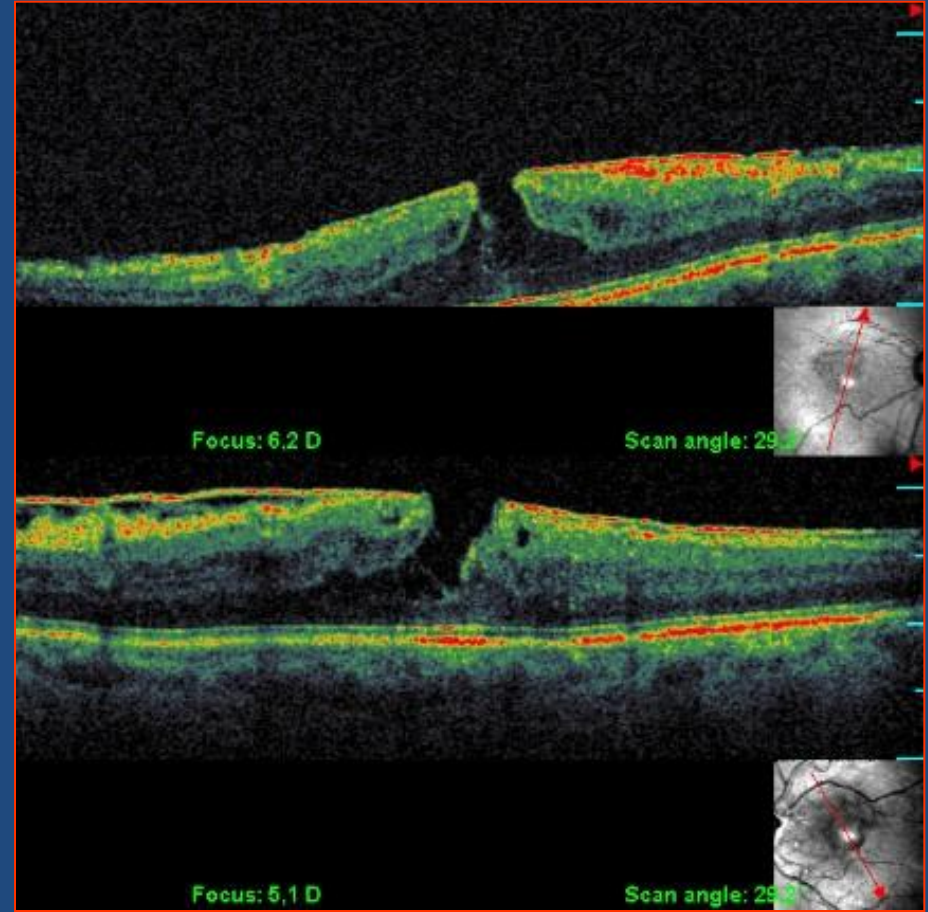
TANJANSİYEL TRAKSİYON



- Kistik değişiklikler: iç / dış nükleer tabakalarda
- Tabandaki RPE intakt, drusenoid birikintiler
- Hole komşu retina, RPE' den kalkık

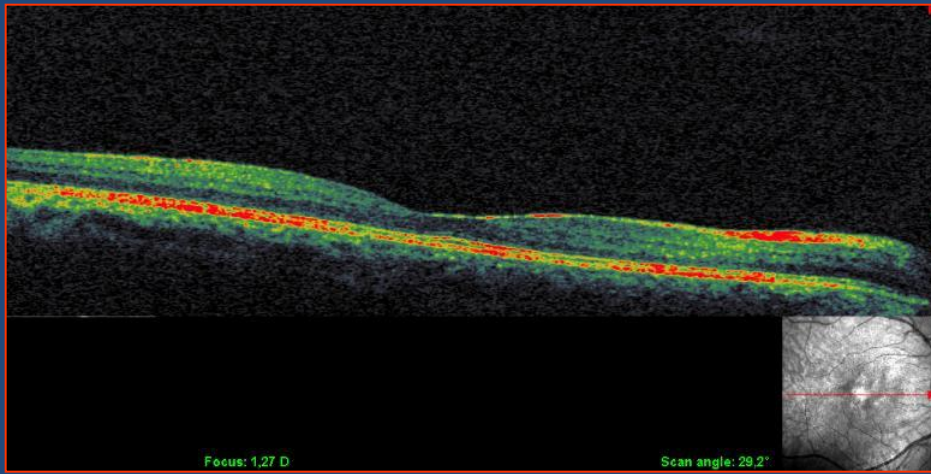
EPIRETİNAL MEMBRAN

- 50 yaş üstü % 2
75 yaş üstü % 20
- % 20 – 30 bilateral
- 36 ay takipde: % 71 stabil, % 26 azalma, % 3 spontan ayrılma
- Birkaç ayda maksimum oluşum, sonra stabilizasyon
- **Sınıflama:**
 - * İdiopatik
 - * Sekonder (% 3 – 8.5)
 - Pigment hücresi: retina yırtığı
 - İnflamasyon hücresi: üveit

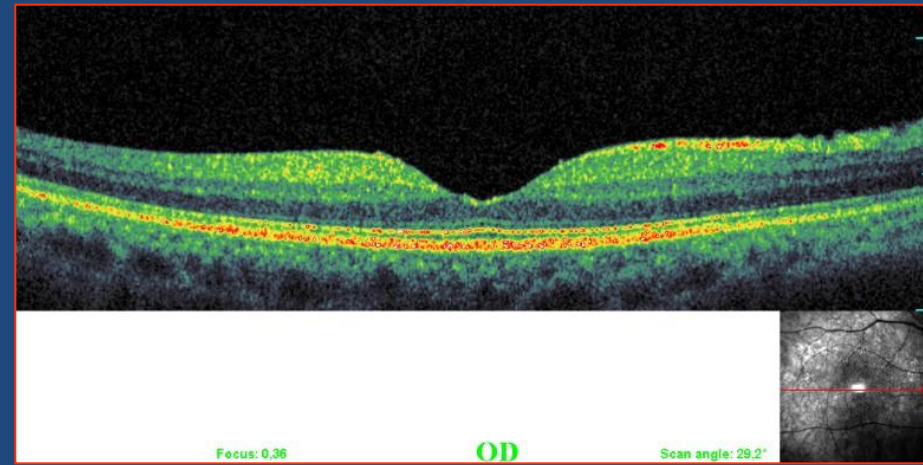


BİLATERAL ERM & PSÖDOHOLE

EPİRETİNAL MEMBRAN



SELOFAN MAKÜLOPATİ - EVRE 0



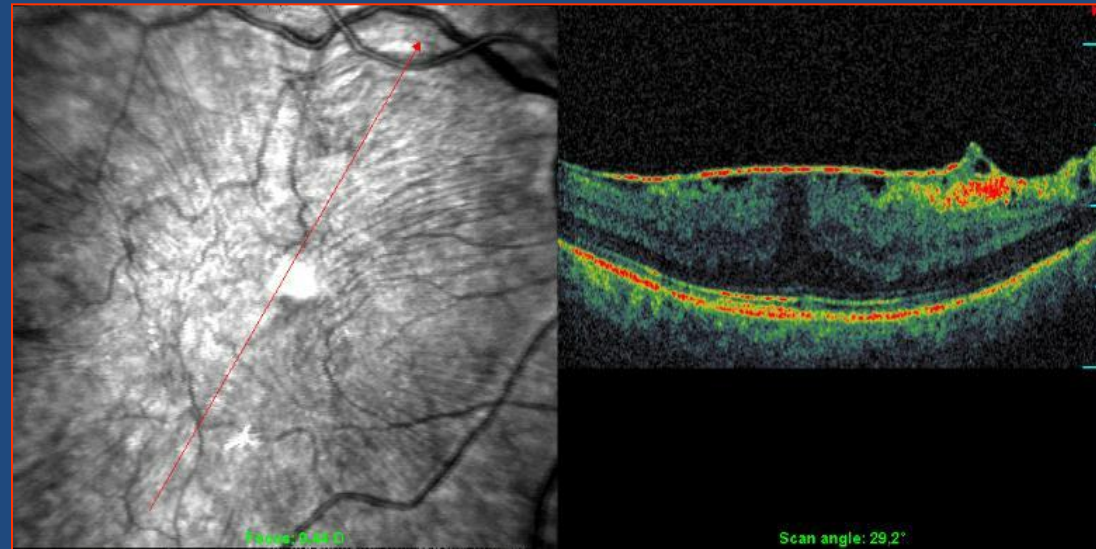
YÜZEY BURUŞUKLUK-EVRE 1

Evreleri:

Evre 0: Selofan makülopati
(parlak İLM)

Evre 1: Yüzey buruşukluk
(parlak, pilili İLM)

Evre 2: Maküler pucker

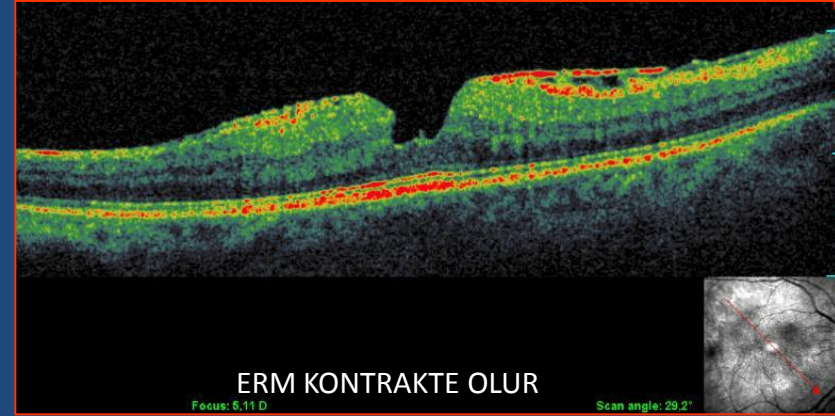


PUCKER - EVRE 2

EPİRETİNAL MEMBRANIN ALT TIPLERİ

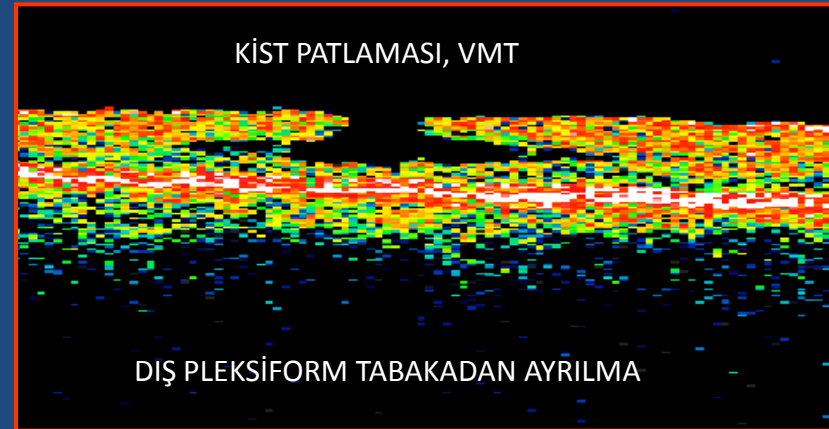
Psödohole:

- Dik kuyu şeklinde foveal kontur
- Kalın / kistik maküler kenar
- Kuyunun dibinde normal foveal doku
- Genellikle görme iyi

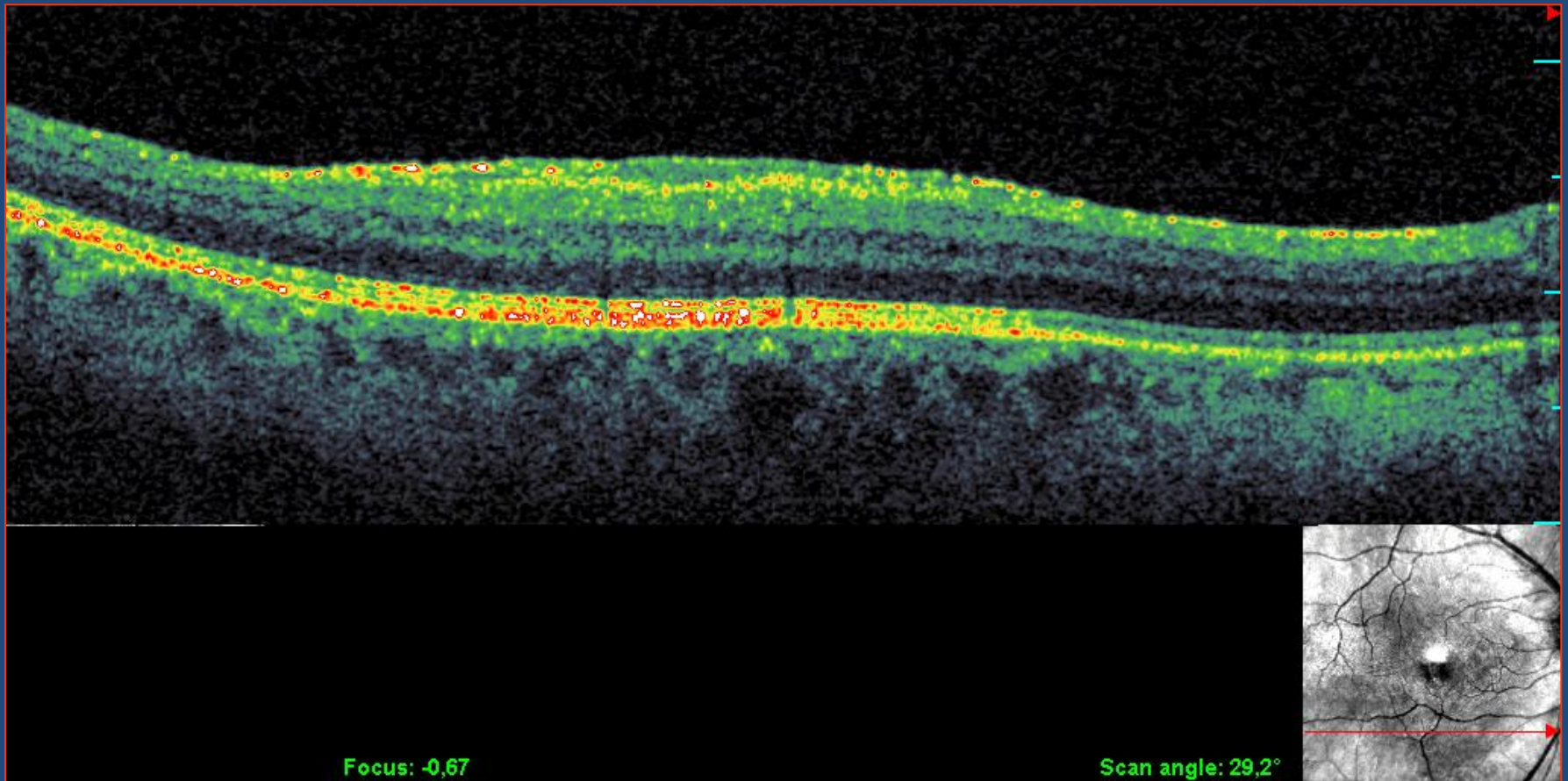


Lameller hole:

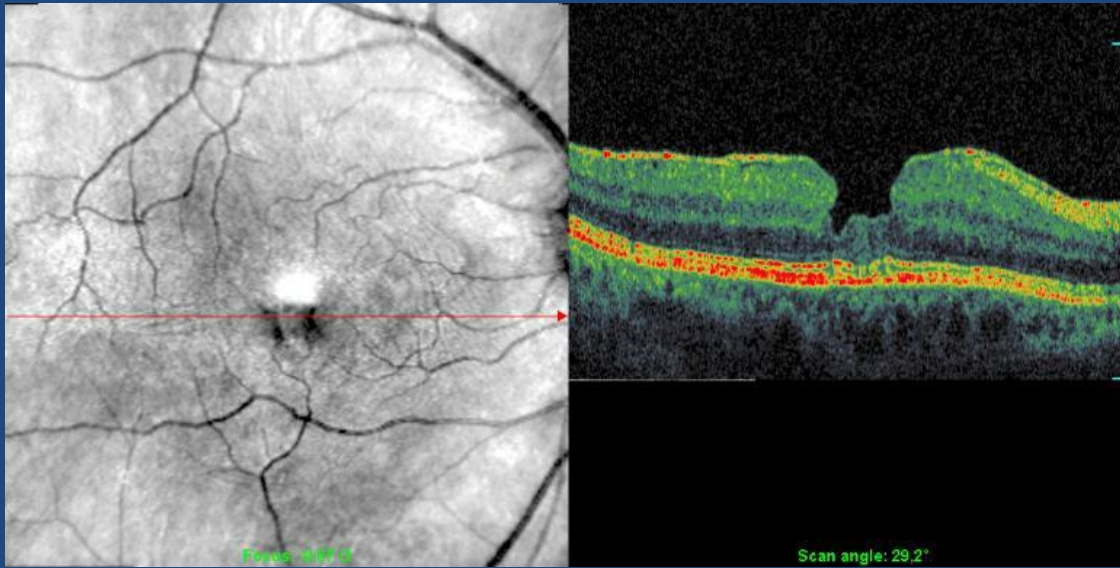
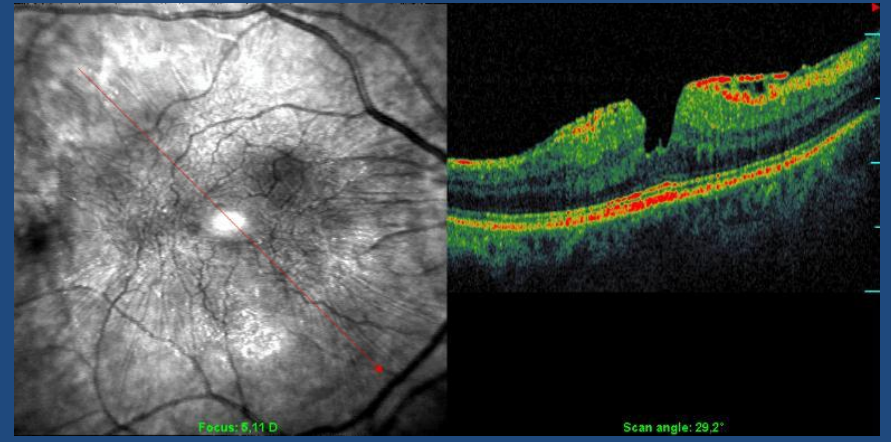
- Yarılmış foveal kenar (örs bulgusu)
- Normal maküler kenar, kistik değişiklikler yok
- Foveolar incelme
- Kalın ERM (% 89 olguda)



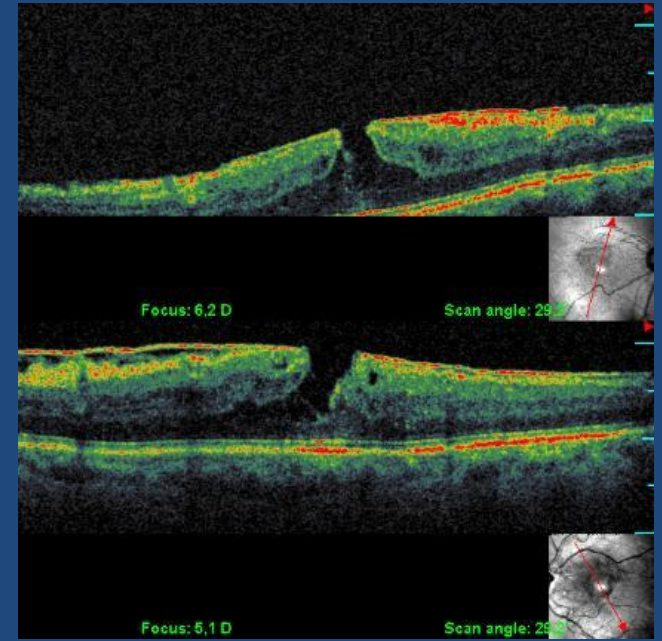
EPIRETINAL MEMBRAN - PSÖDOHOLE



EPIRETİNAL MEMBRAN ----- PSÖDOHOLE

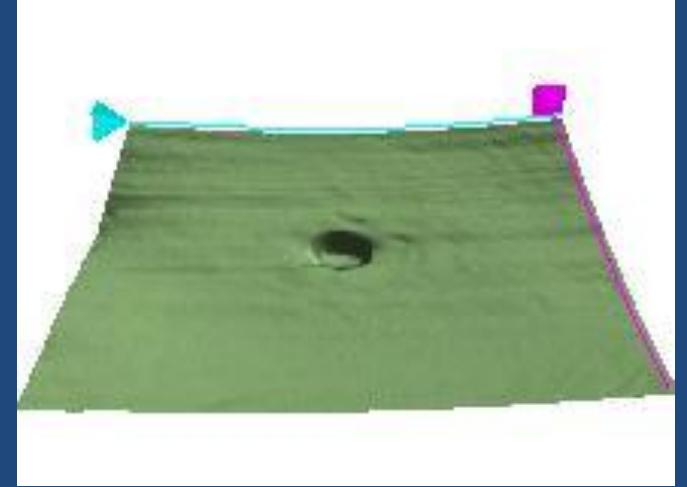
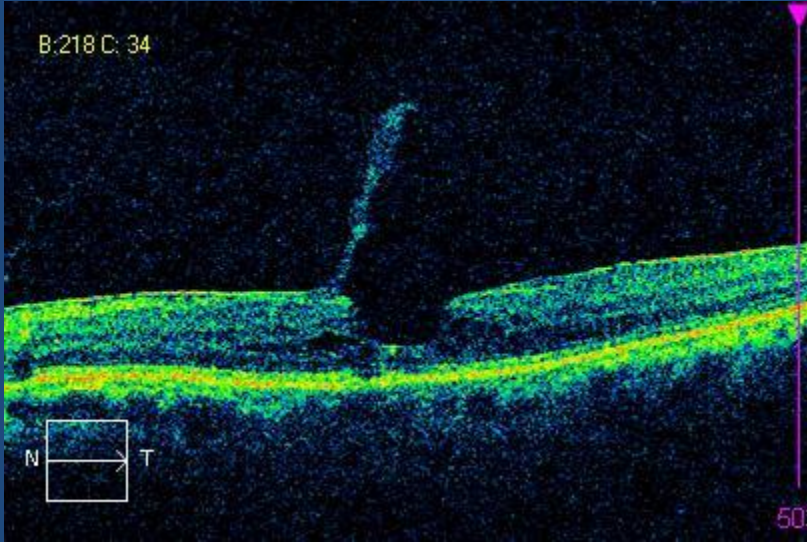


Dik kontur, kenarda kalınlaşma
Dipde retinal doku var

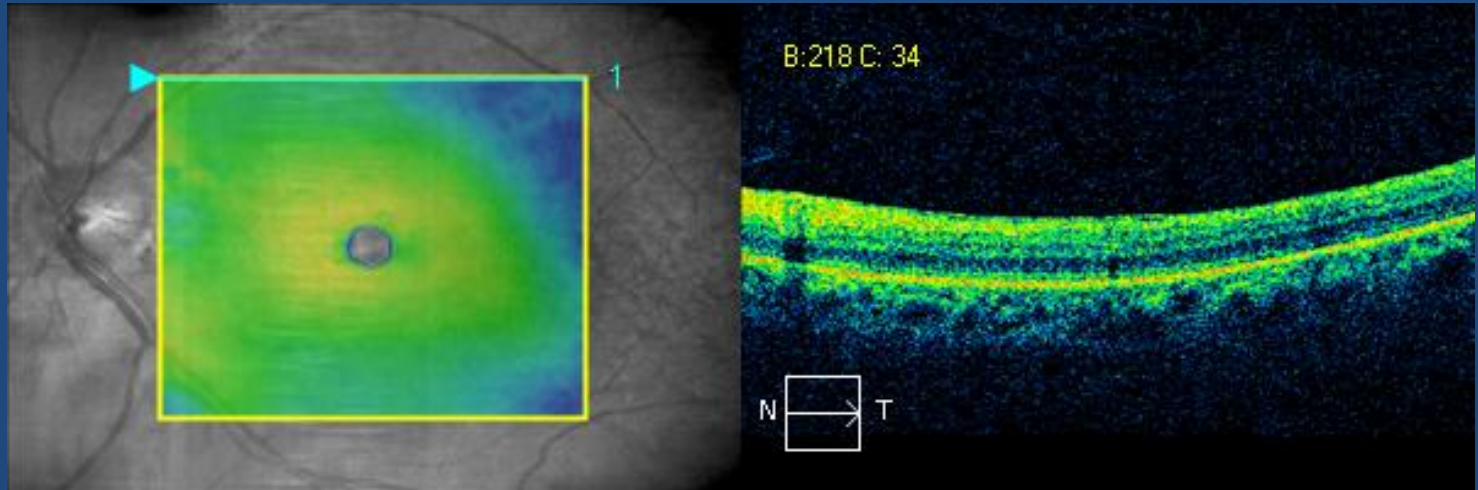


Dış nükleer – dış pleksiform
arasında ayrılma

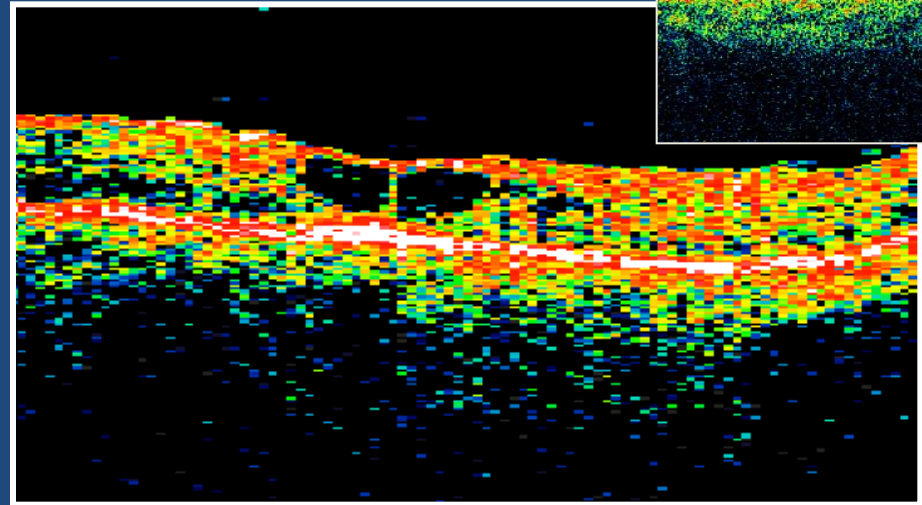
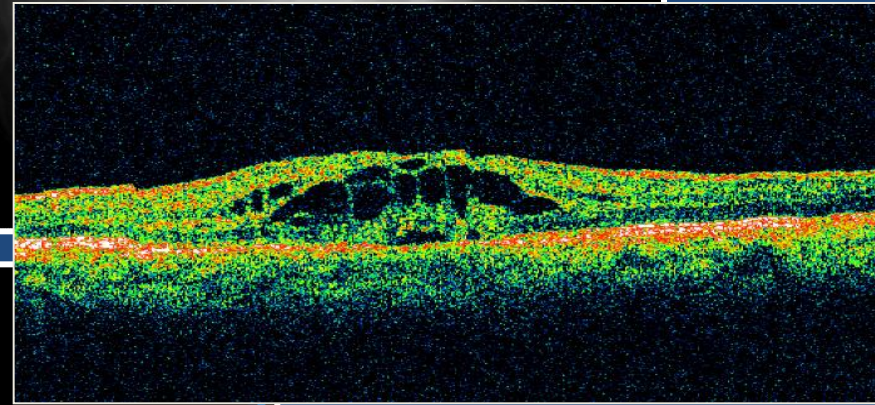
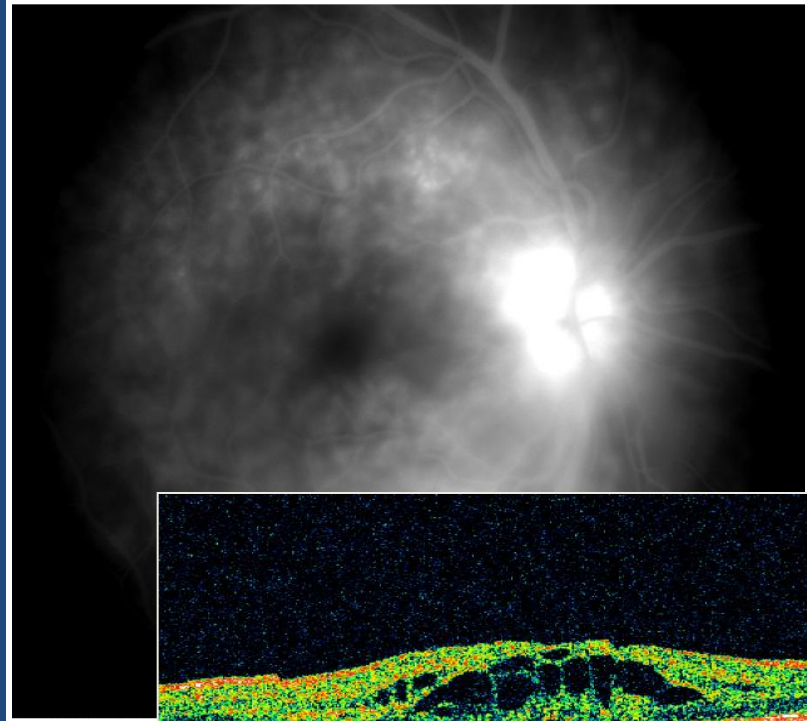
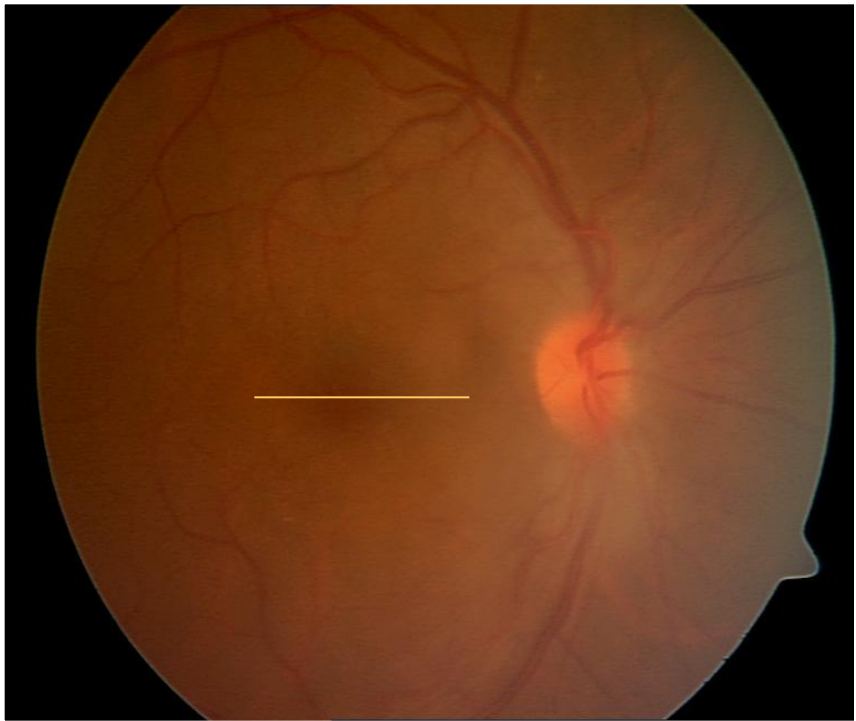
VİTREOMAKÜLER ÇEKİNTİ - LAMELLER HOLE



- Dış nükleer – dış pleksiform tabakalarda ayrılma (Ters örs bulgusu)
- Fotreseptör tabakası sağlam
- Komşu retina intakt

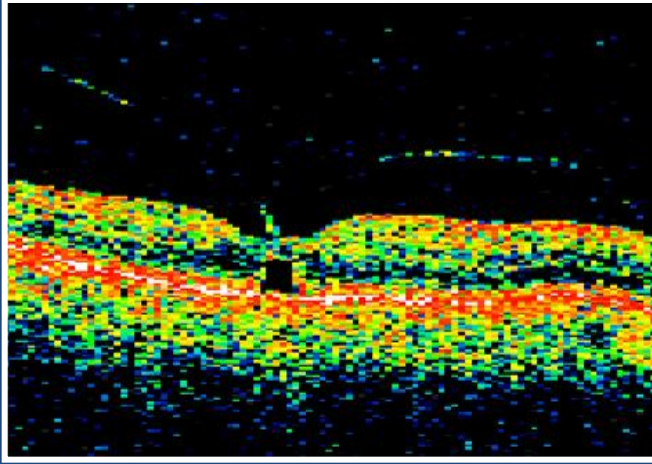


MAKROKİSTİK ÖDEM – LAMELLER HOLE

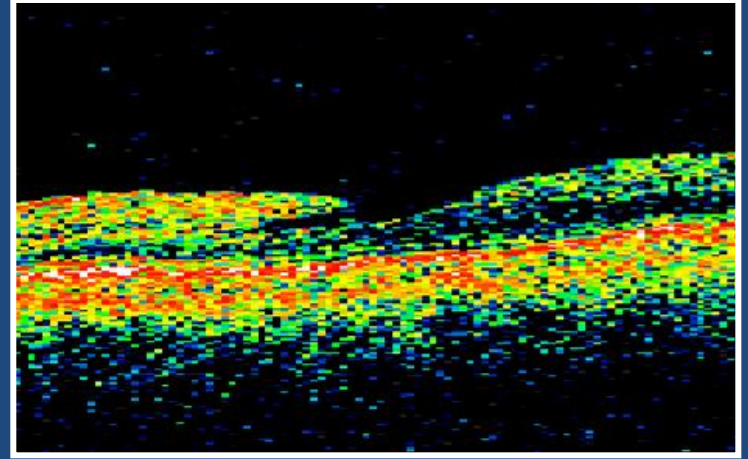


Makrokistik ödem ---- lameller hole

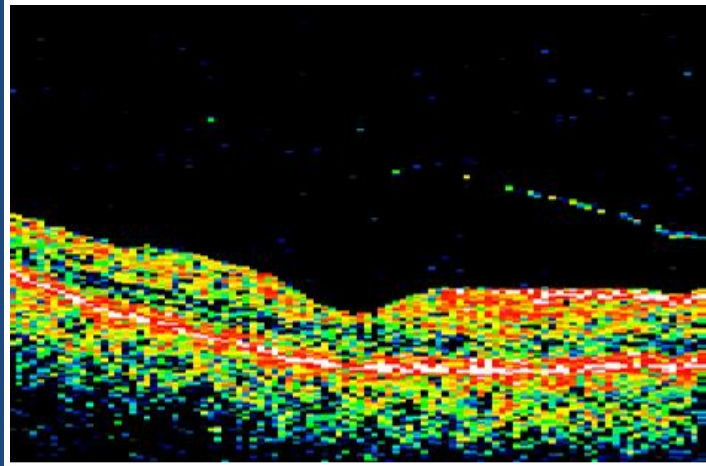
N.Ş.



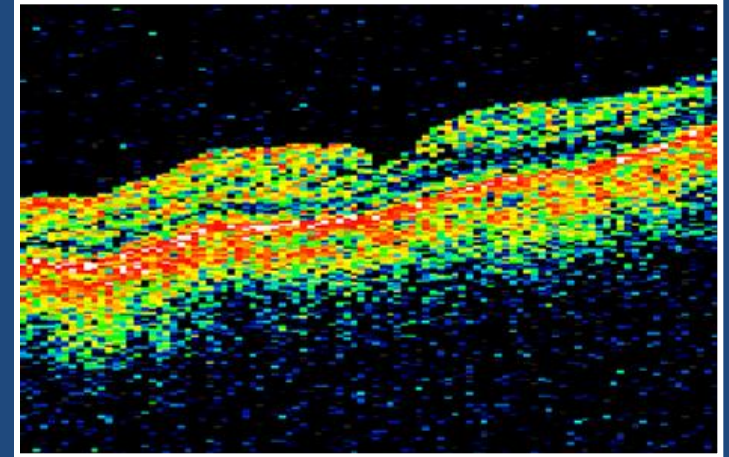
31.8.2003 Sağ : Evre 1, VM çekinti



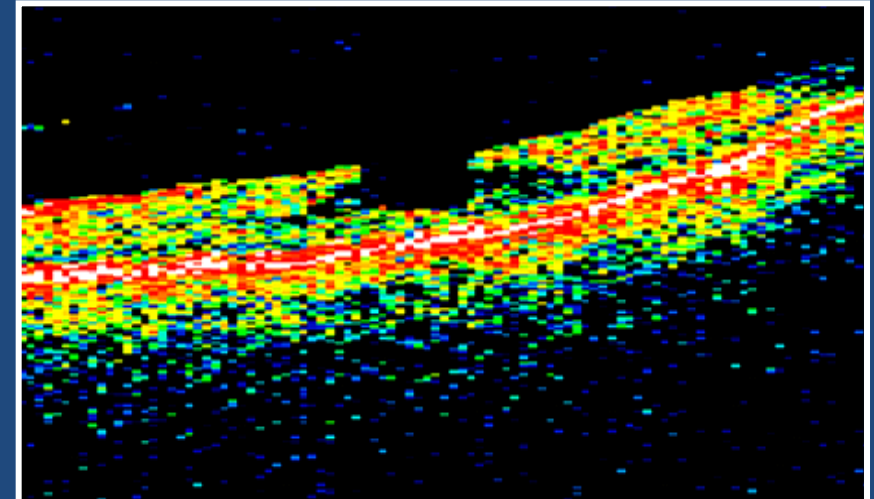
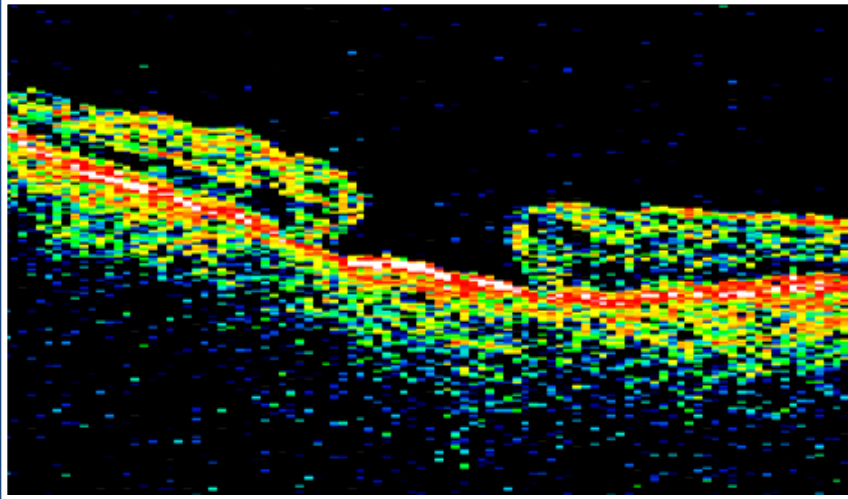
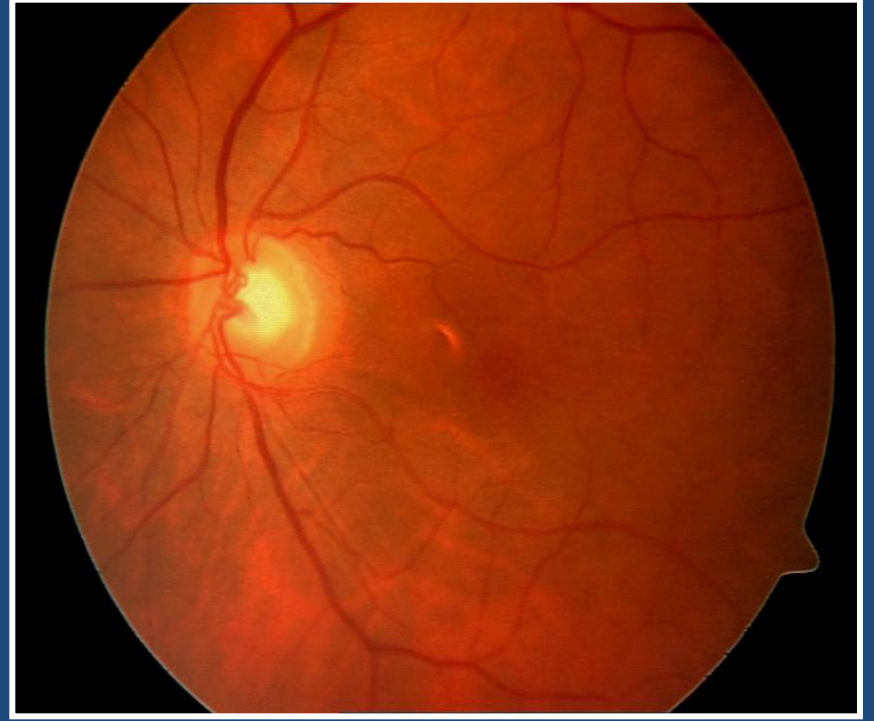
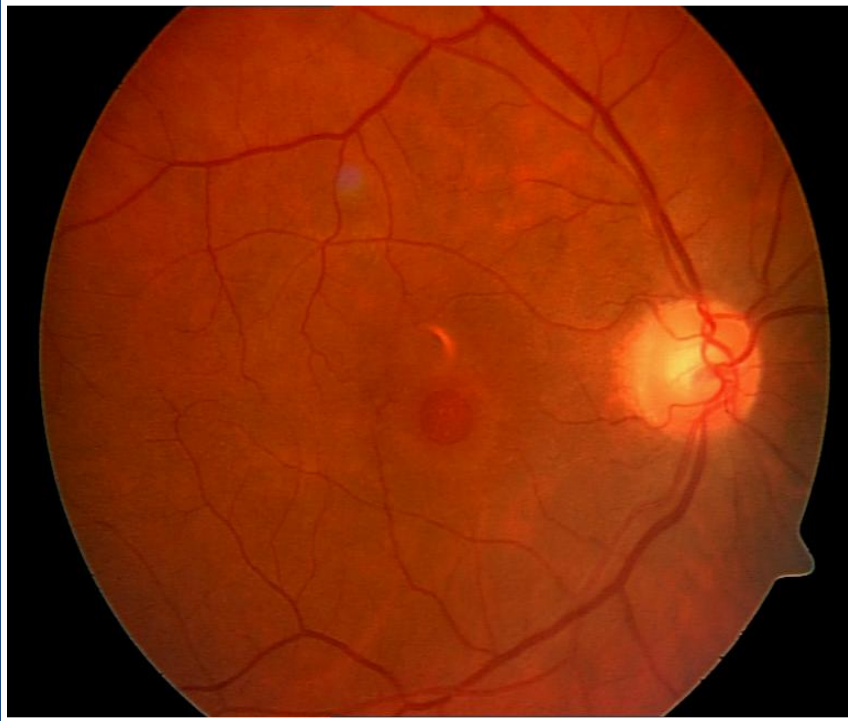
Sol : Lameller hole



16.9.2003 Sağ : VM çekintinin
ayrılması



Sol : Lameller hole



Tam kalınlıklı hole

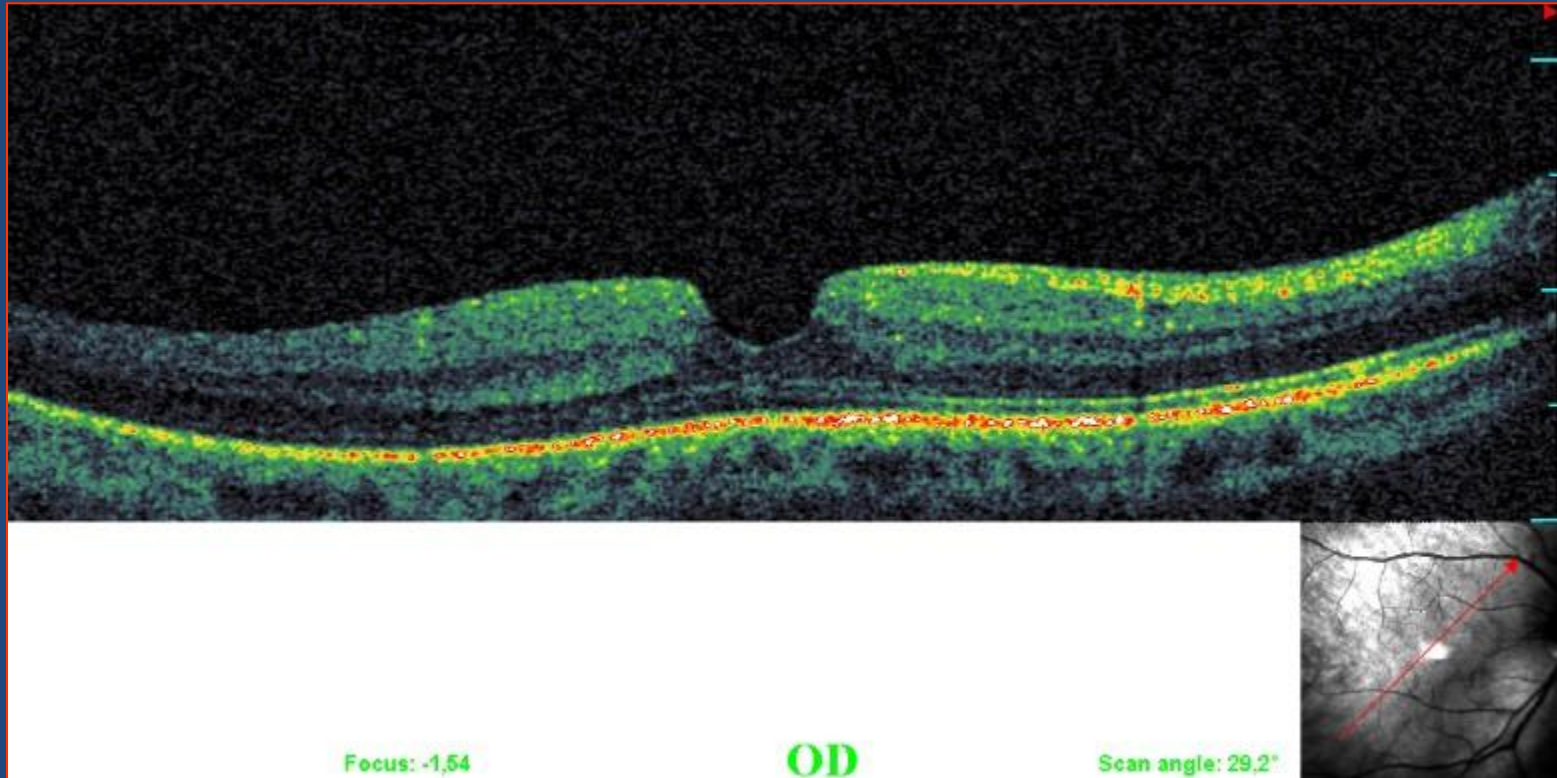
Lameller hole

ERM'İN OCT TİPLERİ

- Retinaya tümüyle düz yapışık (% 67)
 - * Sıklıkla idiopatik ERM
 - * Bariz distorsiyon yok, sıklıkla psödohole
 - * Cerrahisi zor
- Retinaya fokal noktalarda yapışık (% 26)
 - * Sıklıkla sekonder ERM
 - * Diseksiyon kenarı bulunur, cerrahi kolay
- İLM – ERM sıkı yapışıklığı
 - * OCT' de görülememe (% 7)
 - * Red – free, SLO ile anlaşılabilme

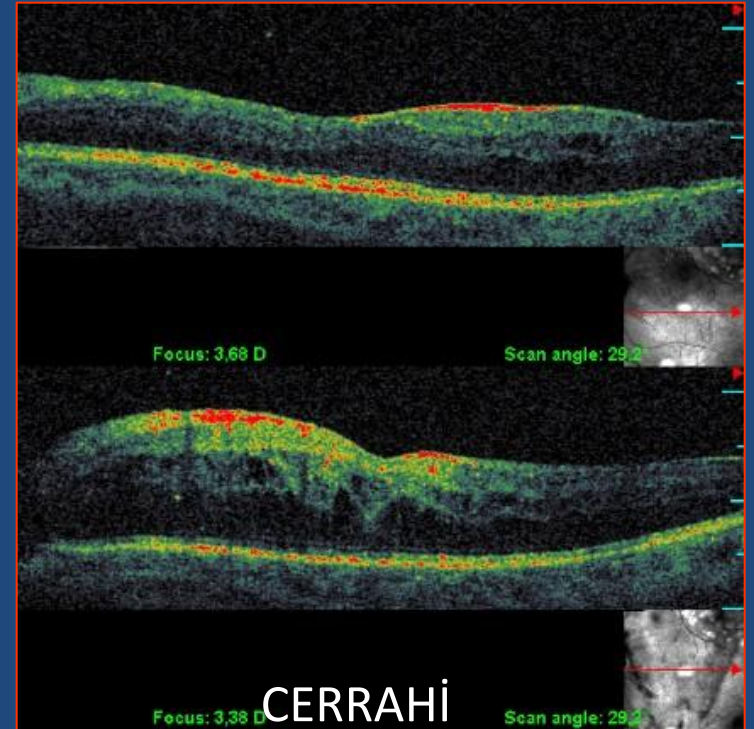
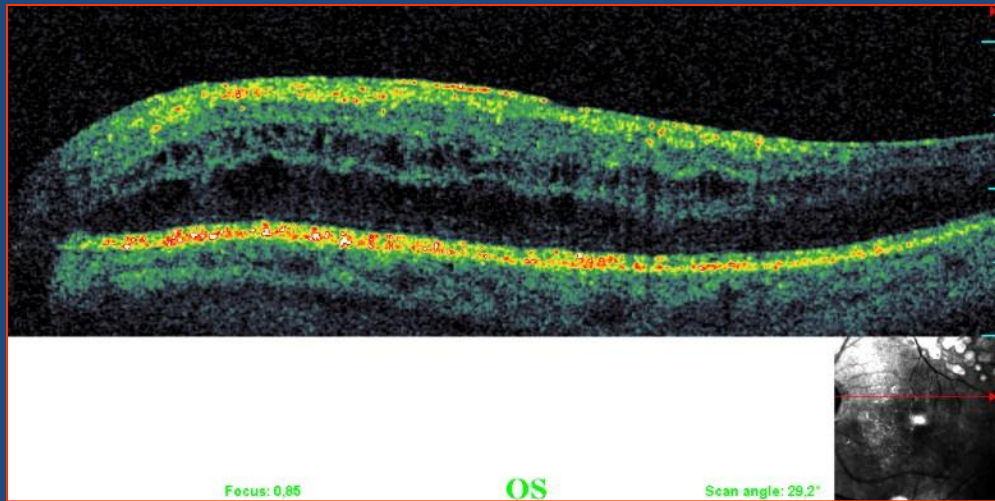
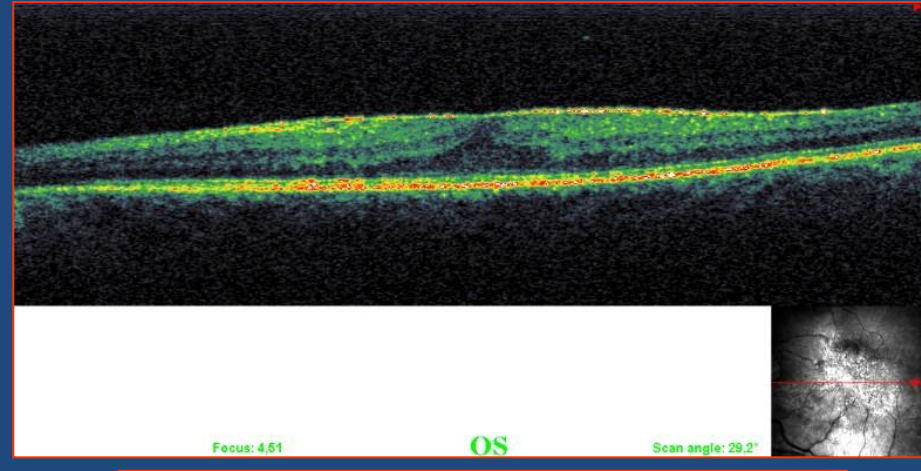
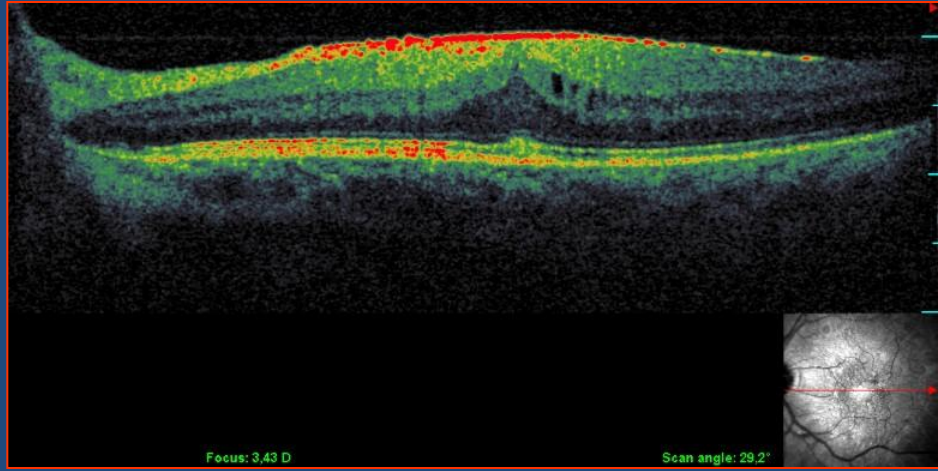
ERM OCT' DE BELLİ DEĞİL

Foveal konturda dikleşme



RED – FREE, SLO FAYDALI

TÜMÜYLE DÜZ YAPIŞIK ERM

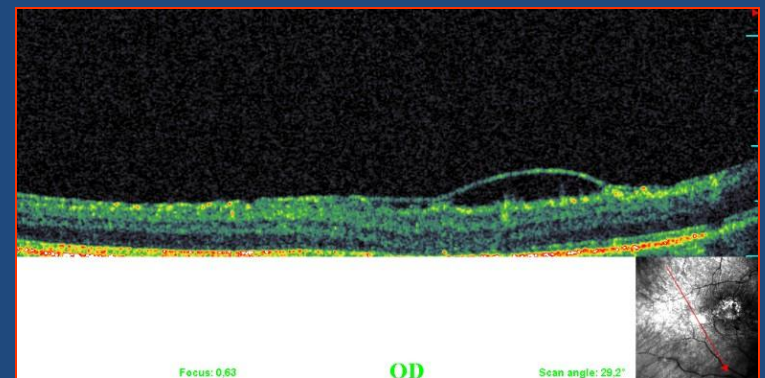
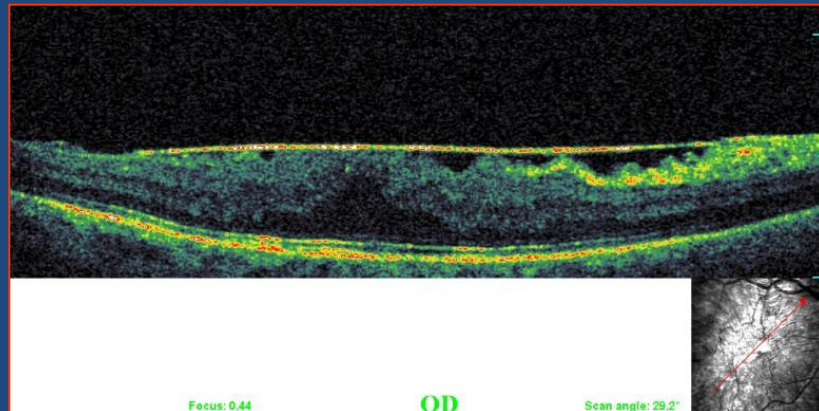
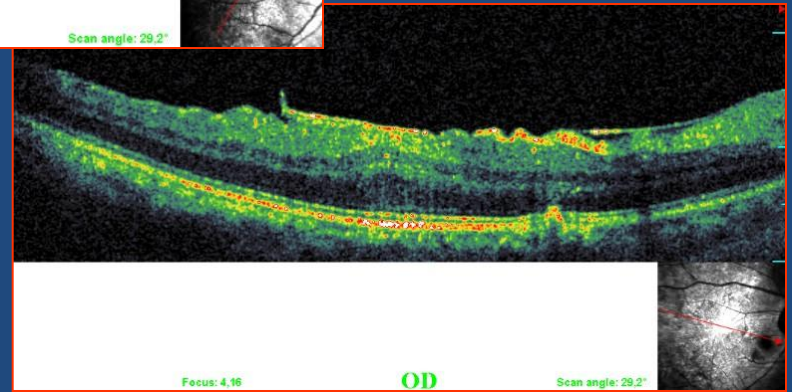
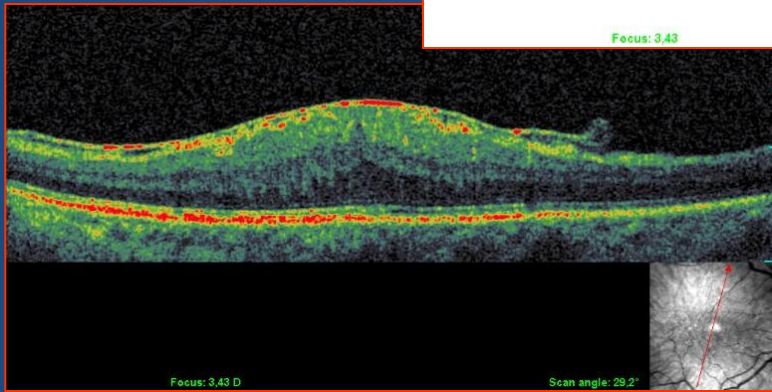
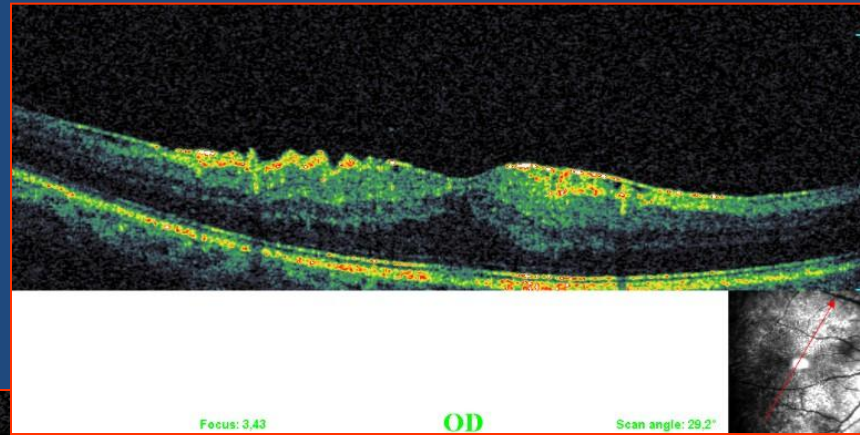


CERRAHI

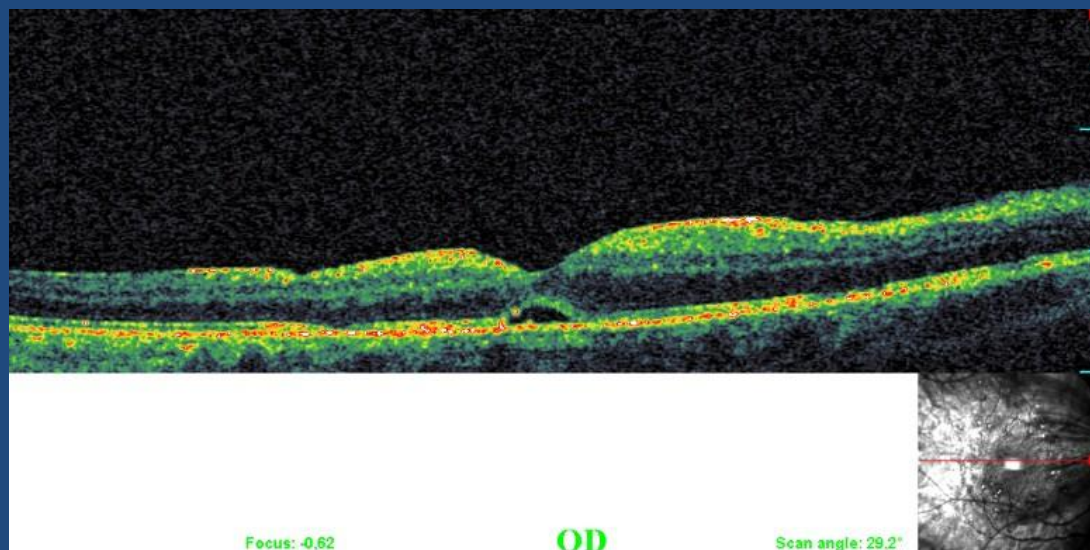
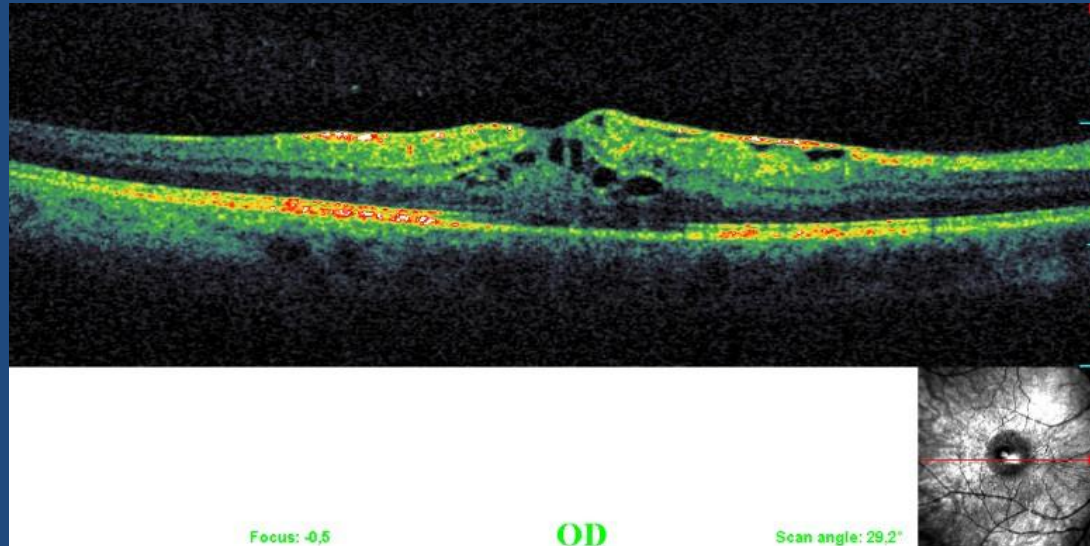
Focus: 3.38 D

Scan angle: 29.2°

FOKAL NOKTALARDA YAPIŞIK ERM



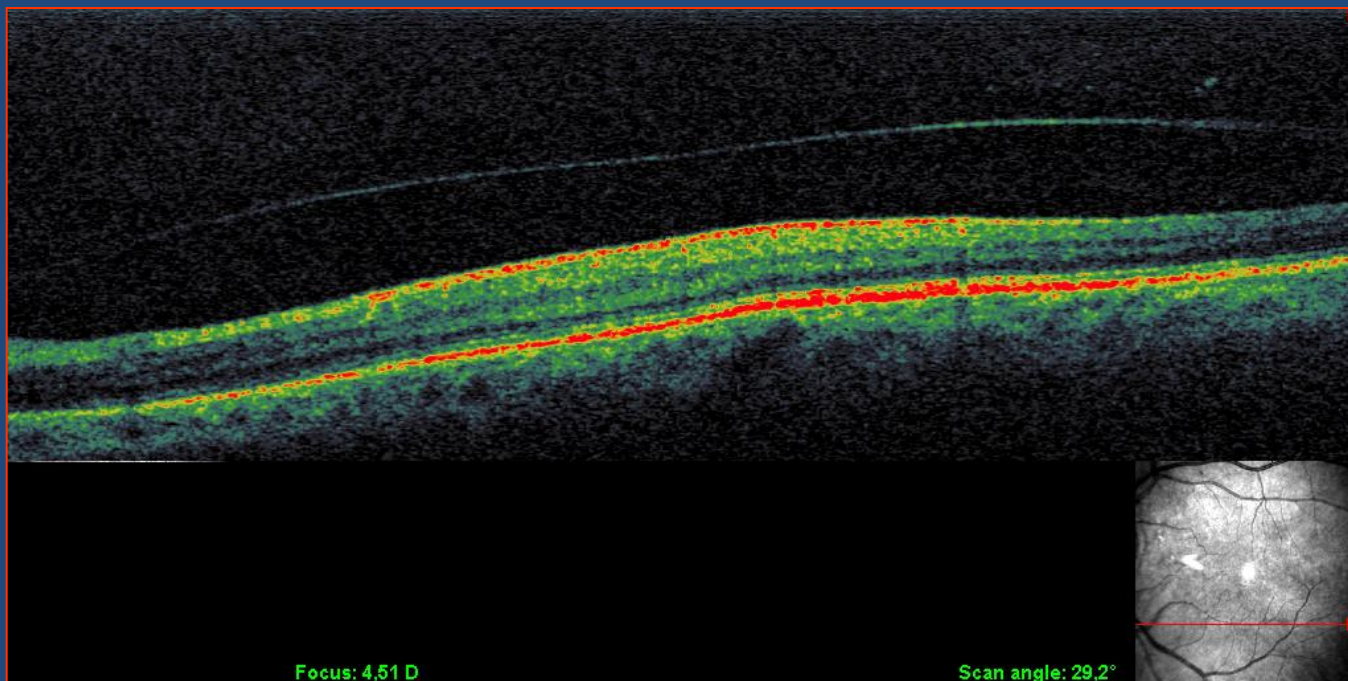
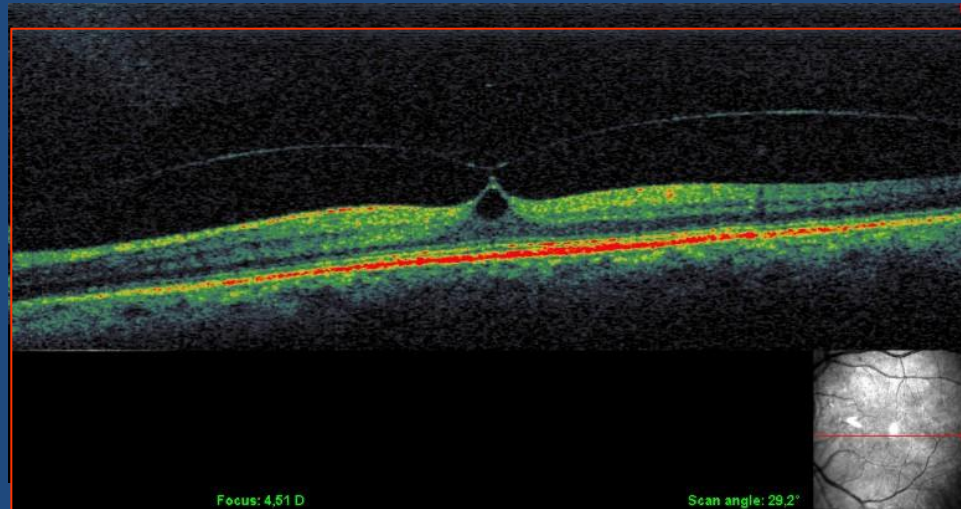
EPIRETİNAL MEMBRAN / CERRAHI



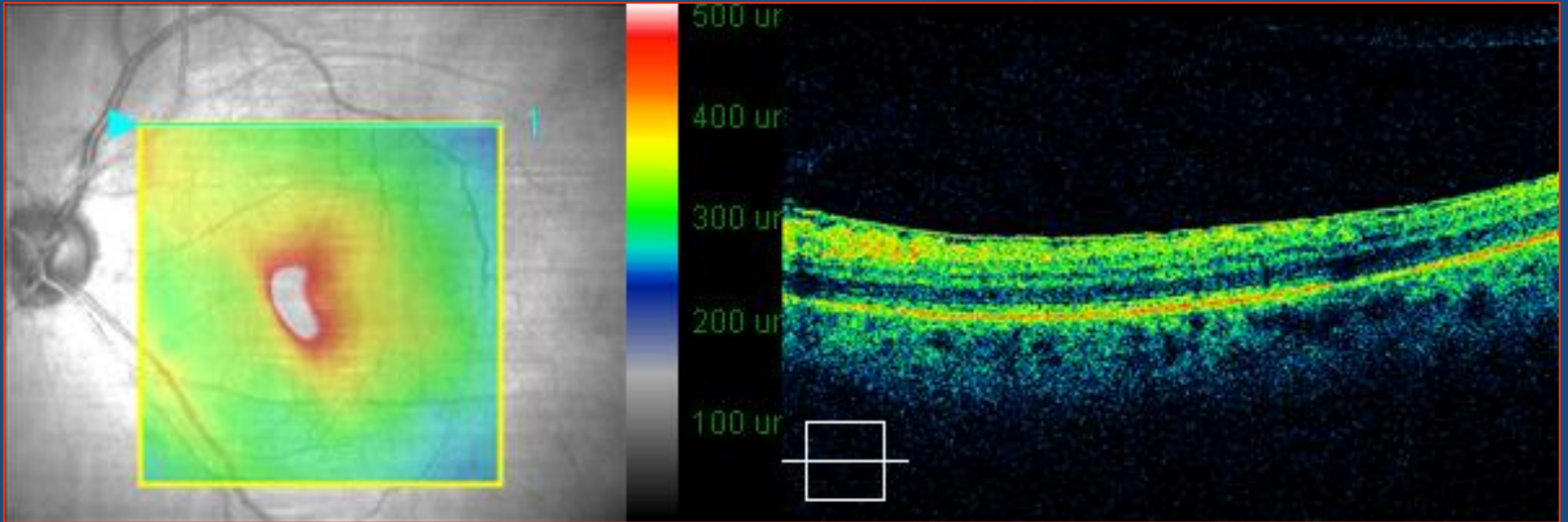
VMT / OCT VE TİPLERİ

- Perifoveal inkomplet arka vitreus dekolman
- Foveaya vitreus yapışıklığı:
 - * V şeklinde fokal yapışıklık (<1500 mikron):
 - Prognoz daha iyi
 - Foveal kavitasyon (psödokist), tam kalınlıklı maküler hole, skizis, FFA' da sızdırmayan KMÖ
 - * Geniş yapışıklık / nazalde yapışık, fovea temporalinde ayrılma (> 1500 mikron):
 - Prognoz daha kötü
 - KMÖ, difüz kalınlaşma
- PVD alanında ERM varlığı: FFA' da maküla ve optik diskte sızıntı

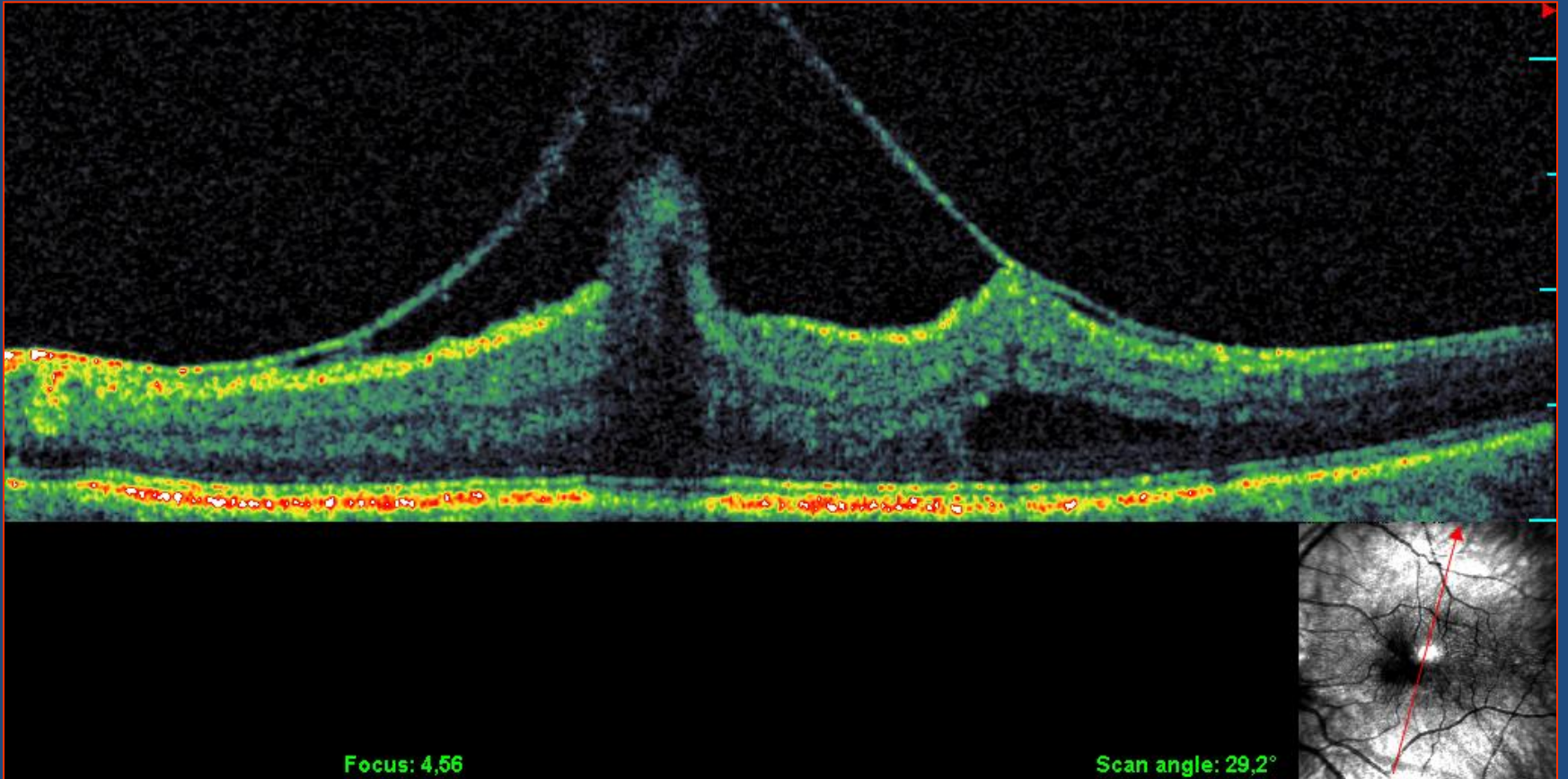
FOKAL VMT / PSÖDOKİST (Kavitasyon)



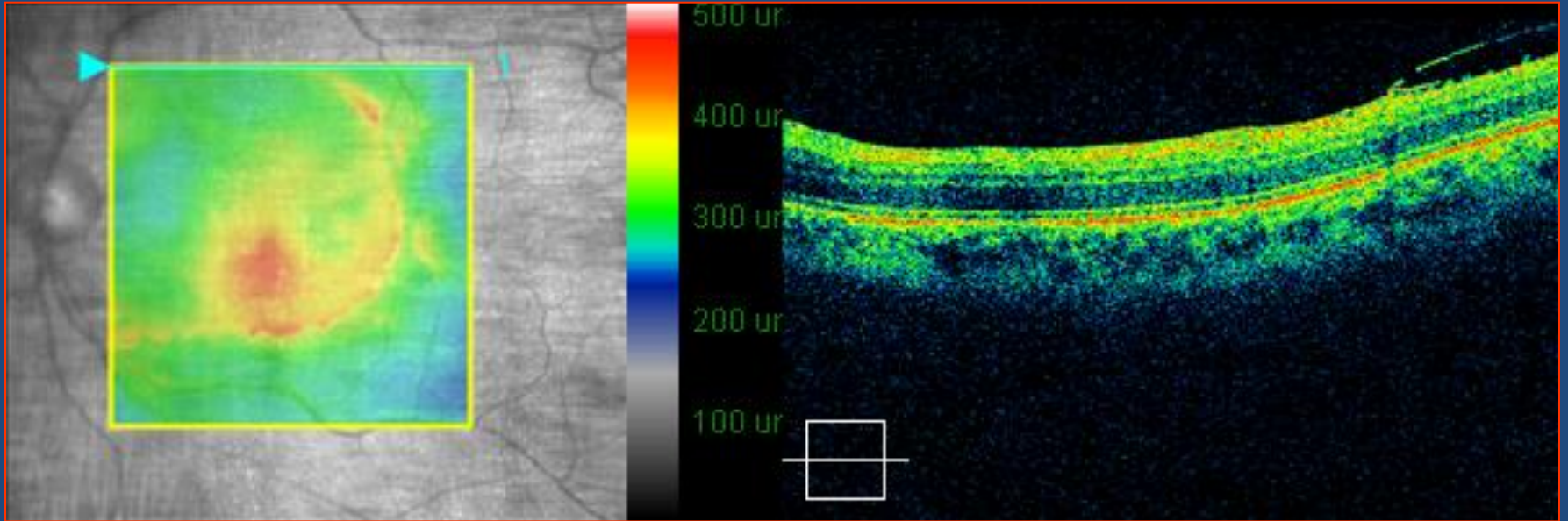
V ŞEKLİNDE FOKAL YAPIŞIK VMT



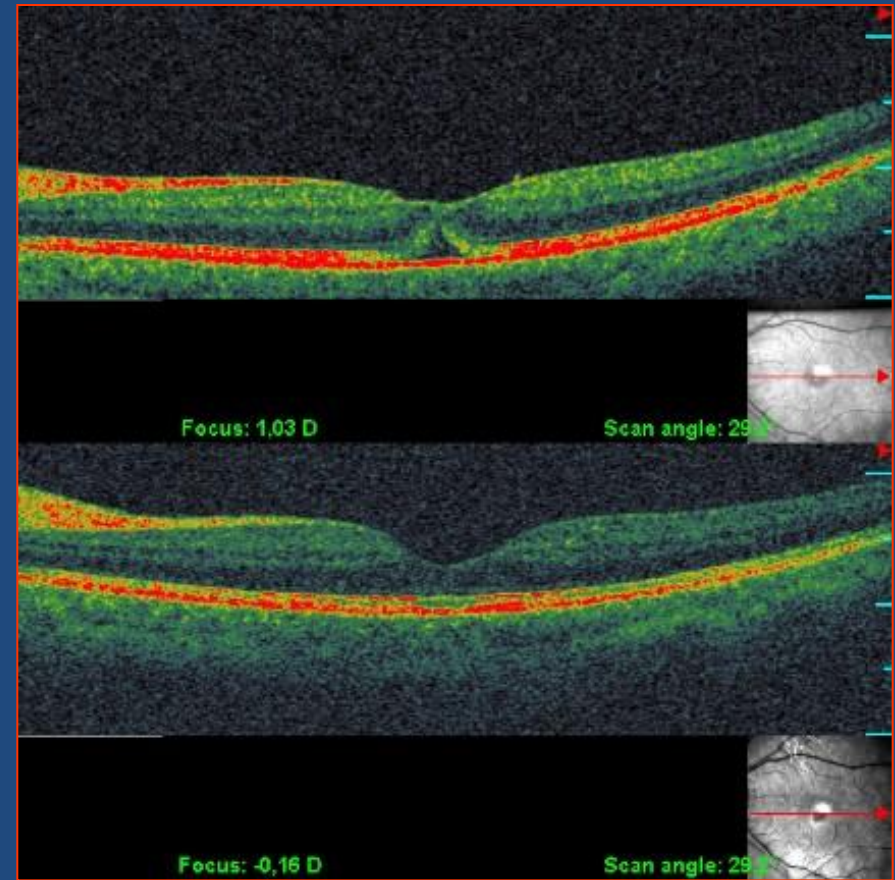
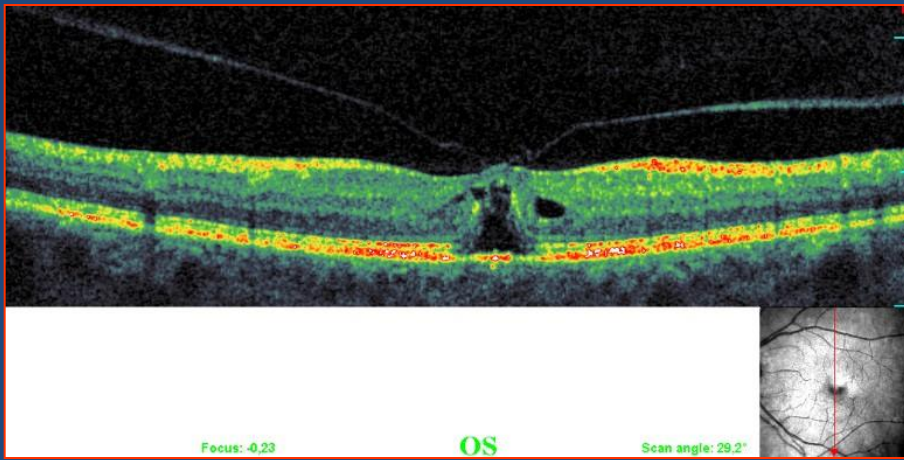
GENİŞ YAPIŞIK VMT



MASA ŐEKLİNDE / GENİŐ YAPIŐIK VMT



FOKAL VMT – FOVEAL KAVİTASYON



CERRAHI

ERM VE VMT' DA ORTAK ANATOMİK ÖZELLİKLER VAR

Farklar

ERM

- Yavaş ilerler, görme stabil
- Genellikle tam PVD var
- ERM saptamada klinik=OCT
- Daha çok multifokal yapışıklık

VMT

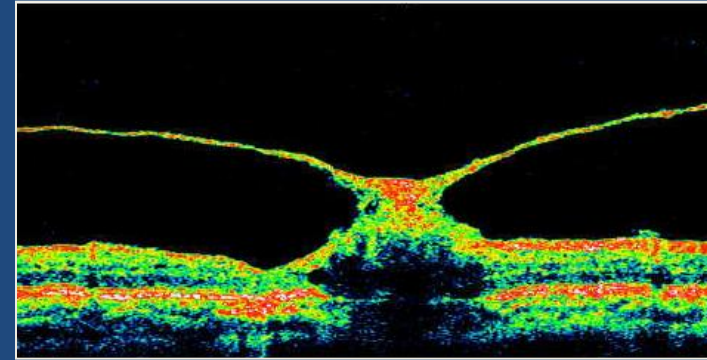
- Hızlı ilerler, ciddi görme azalması
- İnkomplet PVD
- Vitreomaküler yapışıklığı ,
ödemi saptamada SD –OCT /
C scan çok üstün
(Bazen TD – OCT' de yapışıklık
görülmez; imaj horizontal
olarak gerilmiş gibidir)
- Daha çok fokal yapışıklık

CERRAHİ KARARINDA OCT

- Erken cerrahi: görme 0.4 ve üstü (eskiden: 0.2 ve altı)
IS / OS bandının bozulmaması
(iyi preop görme = iyi postop görme)

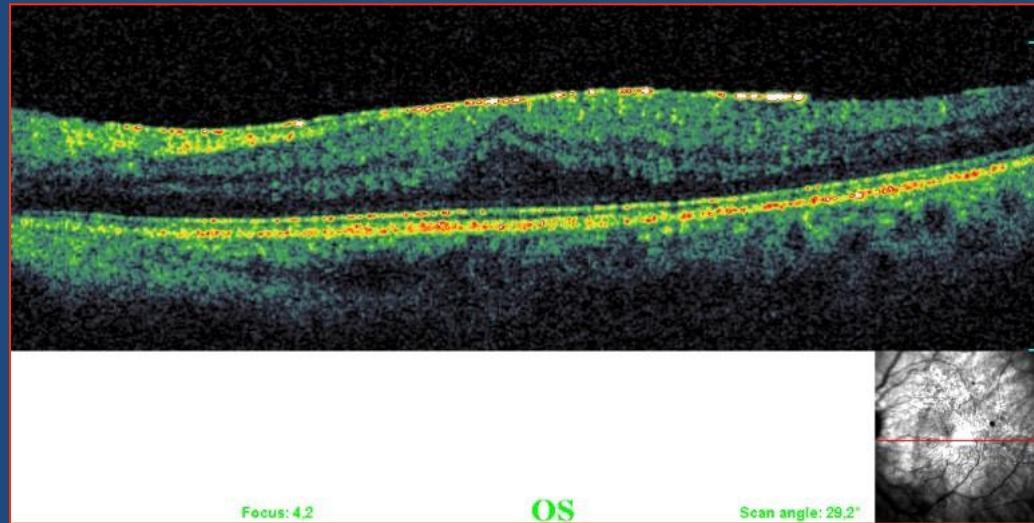
- Santral maküler kalınlık: 350 mikron ve üstü
Traksiyonun / maküler kalınlığın takipde artması
(Santral maküler kalınlık görme ile ters koreledir, ama tek başına prognostik faktör değil)

- İLM' da pililenme artışı
- Dekole arka hiyaloidde, ERM ile devam eden hiperreflektif / kalın bölgeler
(sıkı yapışıklık)

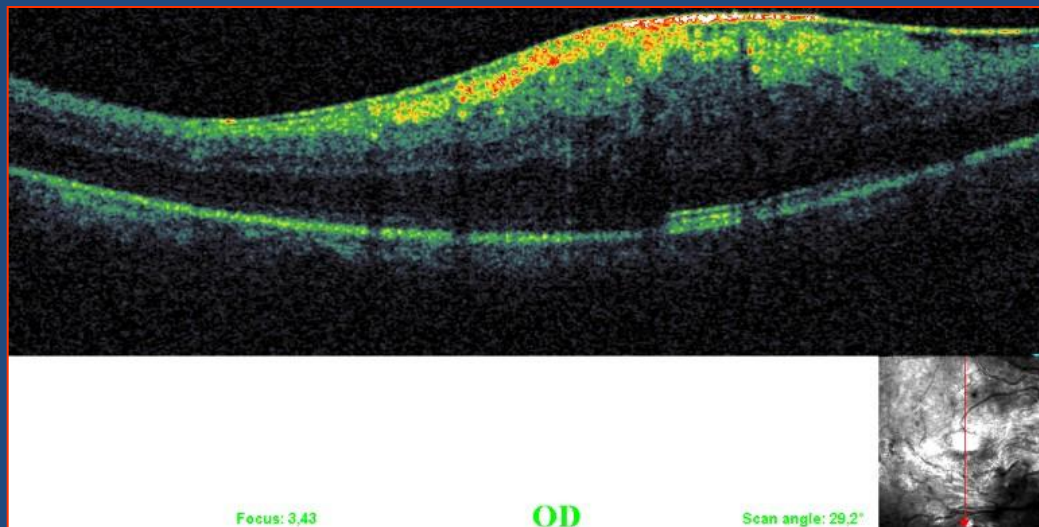


- ERM' nin global yapışıklığı ----- zor cerrahi
- İntraretinal ödem, KMÖ, maküler skizis ----- dikkatli cerrahi
- ERM' in spontan ayrılmasında, gölgelenme artefaktı oluşarak maküler hole benzer

ERM – IS / OS

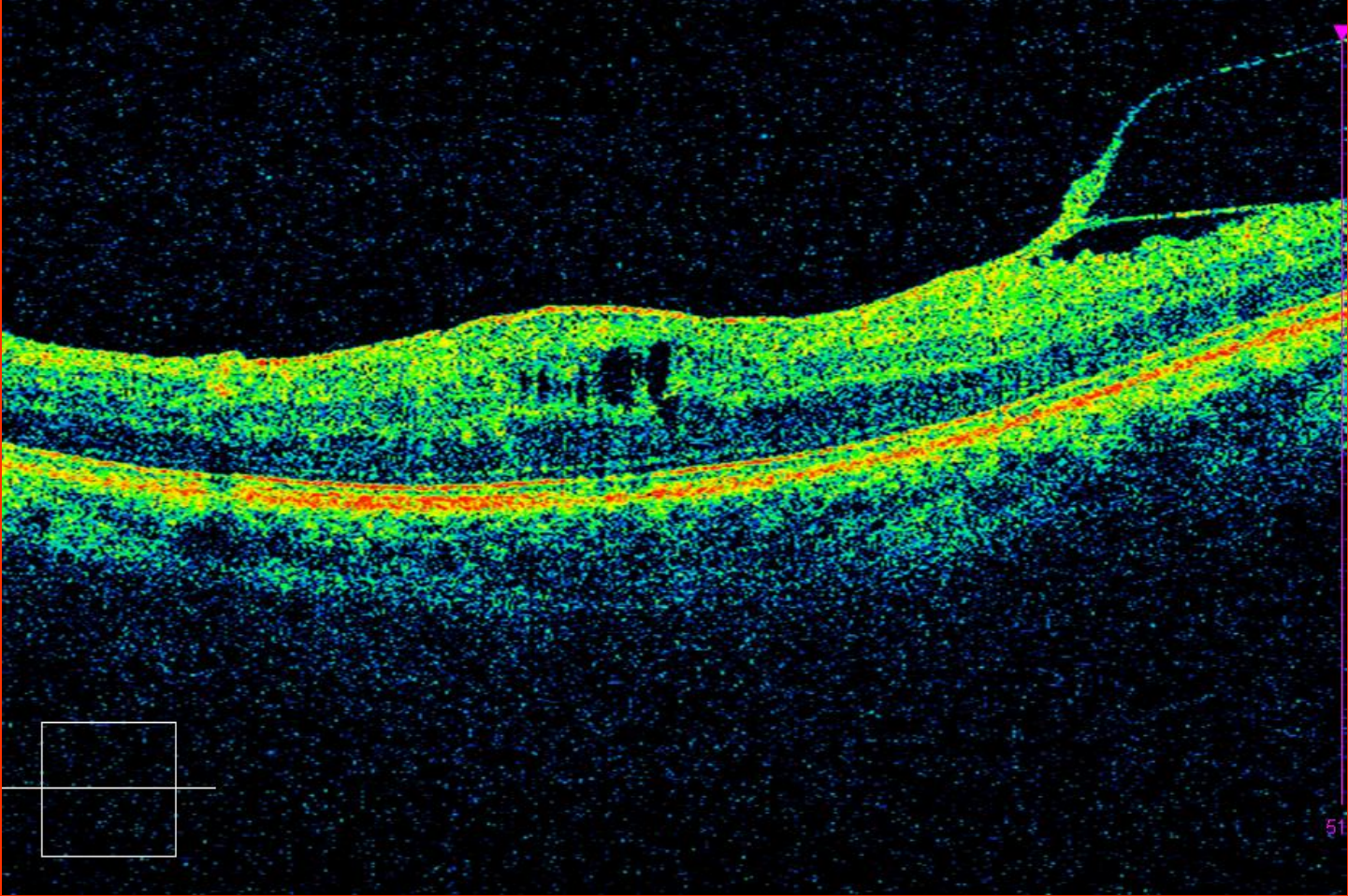


NORMAL



BOZUK

Maküla üstünde ve kısmi dekole arka hiyaloidde devam eden fibroselüler proliferasyon

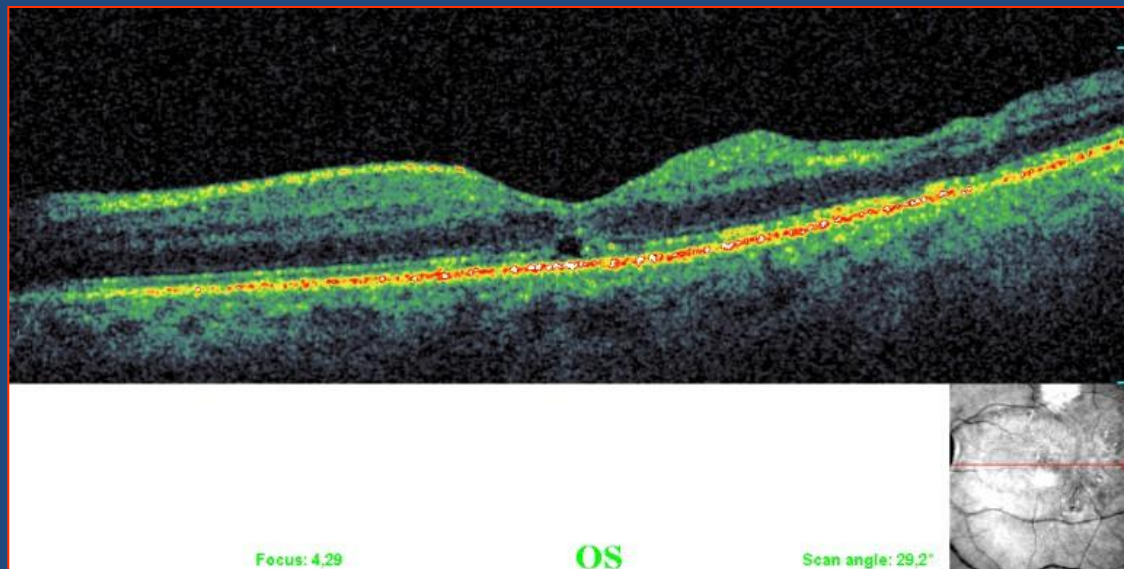
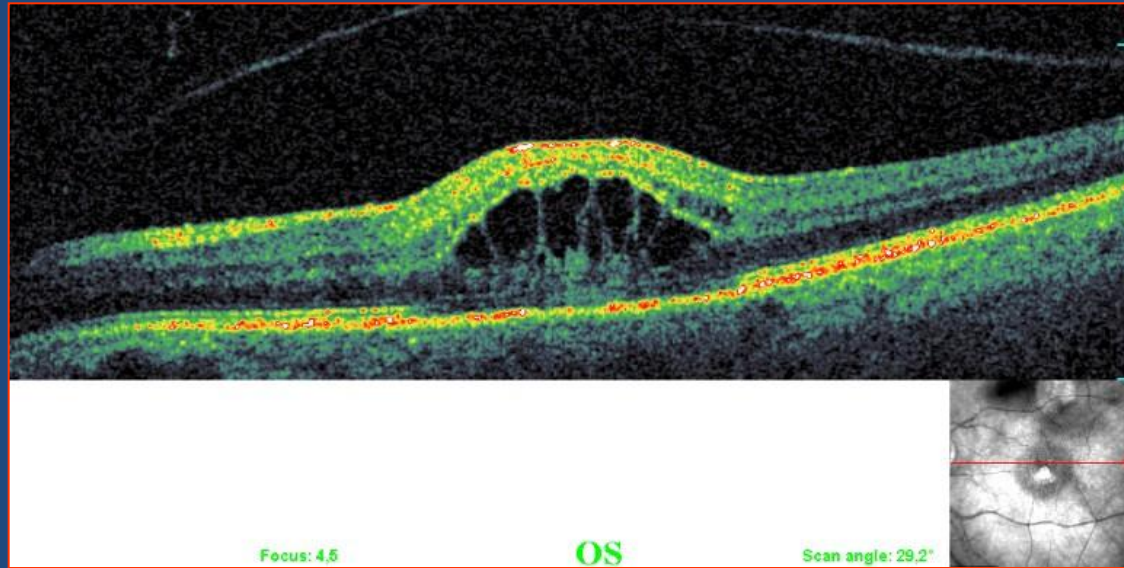


YAPIŞIKLIĞIN KUVVETLENMESİ, SPONTAN AYRILMANIN OLMAMASI

CERRAHİ SONRASI

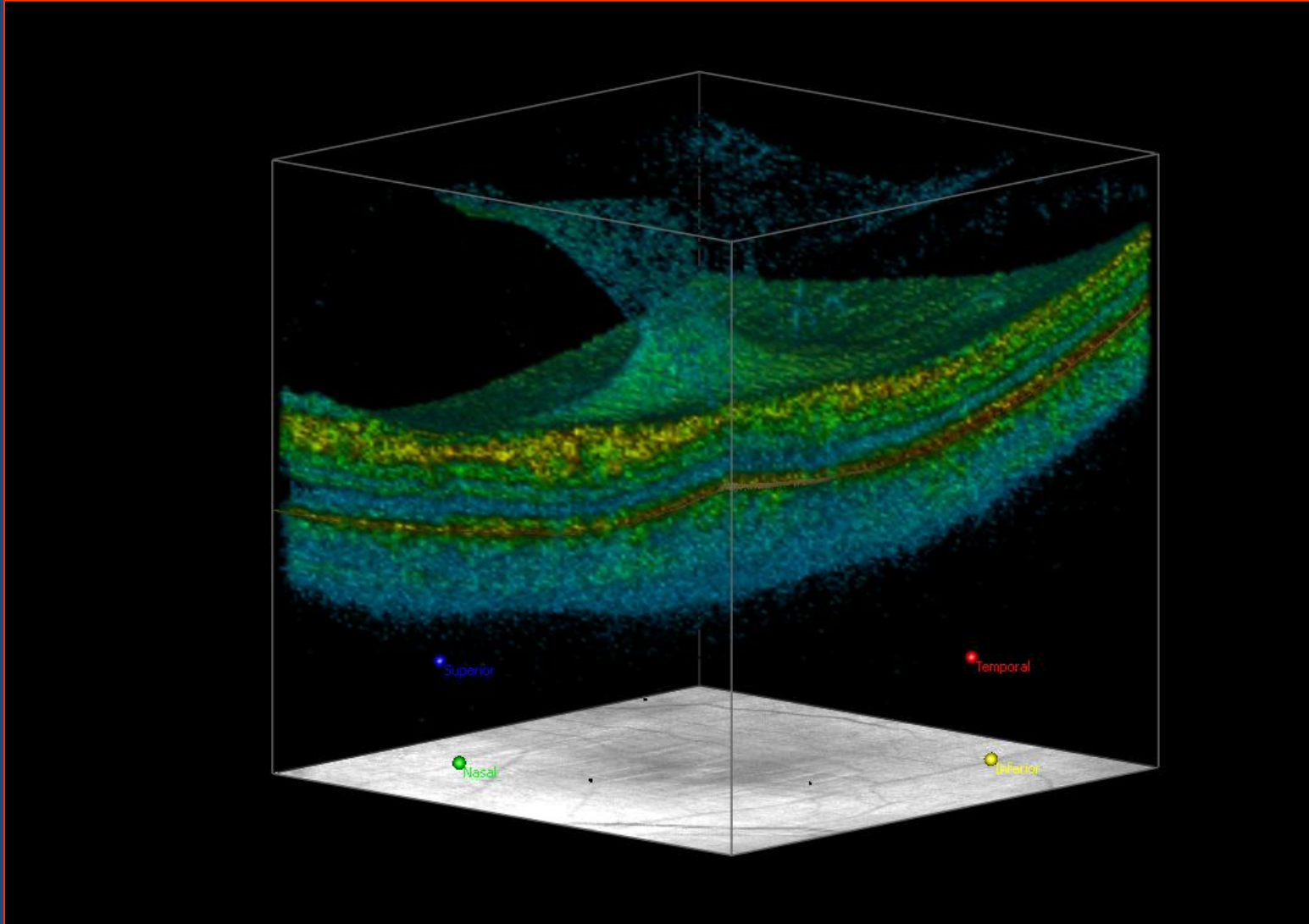
- Cerrahi sonrası foveal kontur tamamen normale dönmeyebilir, fakat görme artışı devam eder
- Cerrahi sonrası iyileşme 6 – 12 ay devam eder
- Cerrahi sonrası % 50 – 75 olguda görme artışı, normal görme nadir

ERM – TOTAL PVD / CERRAHİ



CERRAHİYE YARDIMCI OLABİLECEK GELİŞMELER

ÜÇ BOYUTLU OCT& SEGMENTASYON



SEGMENTASYON / VMT' DA İLERLEME

Name: **ülken, zeynep**
ID: 307886
DOB: 11/20/1942
Gender: Female
Physician:

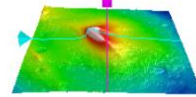
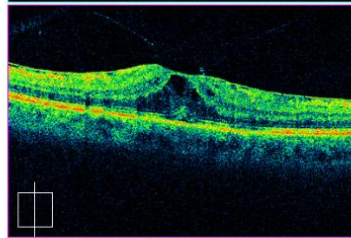
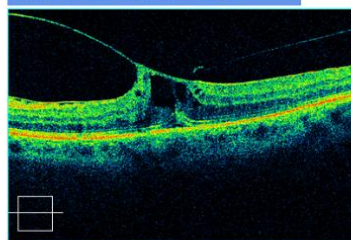
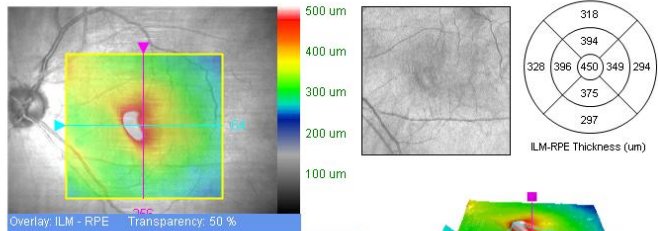
Exam Date: 12/25/2008
Exam Time: 3:32 PM
Technician: Operator, Cirrus
Signal Strength: 8/10

czmi

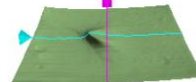


Macular Thickness: Macular Cube 512x128

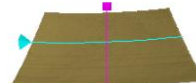
OD OS



ILM - RPE



ILM



RPE

	Central Subfield Thickness um	Volume mm3	Average Thickness um
ILM - RPE	450	11.6	320

Comments
High-definition mode

Physician's Signature

SW Ver: 3.0.0.64
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Page 1 of 1

KLİ

Name: **ülken, zeynep**
ID: 307886
DOB: 11/20/1942
Gender: Female
Physician:

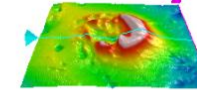
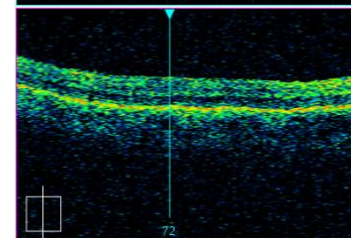
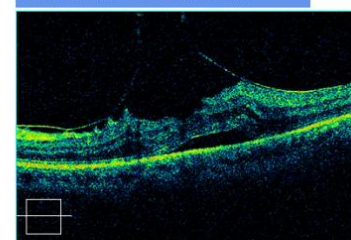
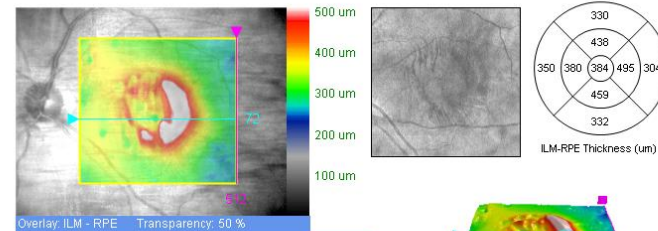
Exam Date: 3/17/2009
Exam Time: 4:31 PM
Technician: Operator, Cirrus
Signal Strength: 6/10

czmi

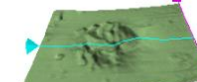


Macular Thickness: Macular Cube 512x128

OD OS



ILM - RPE



ILM



RPE

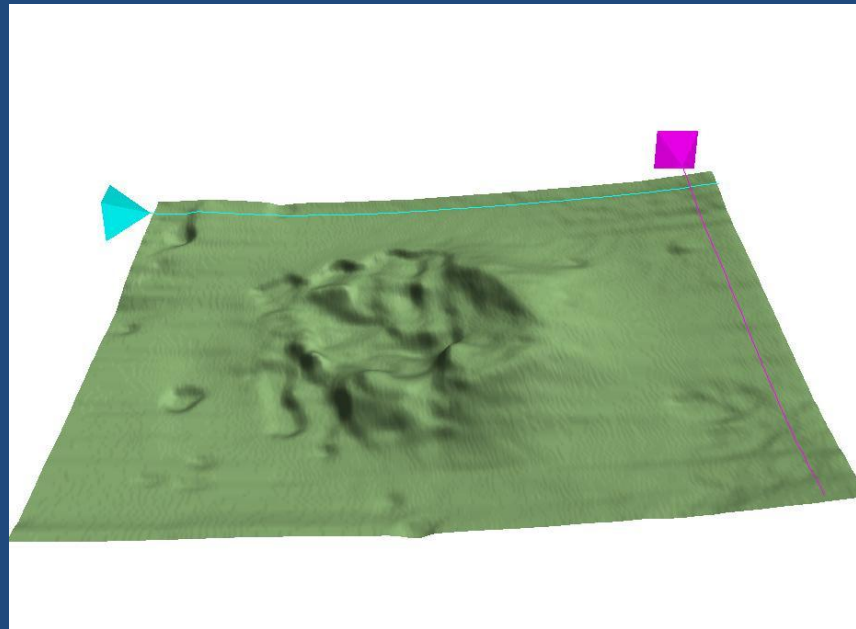
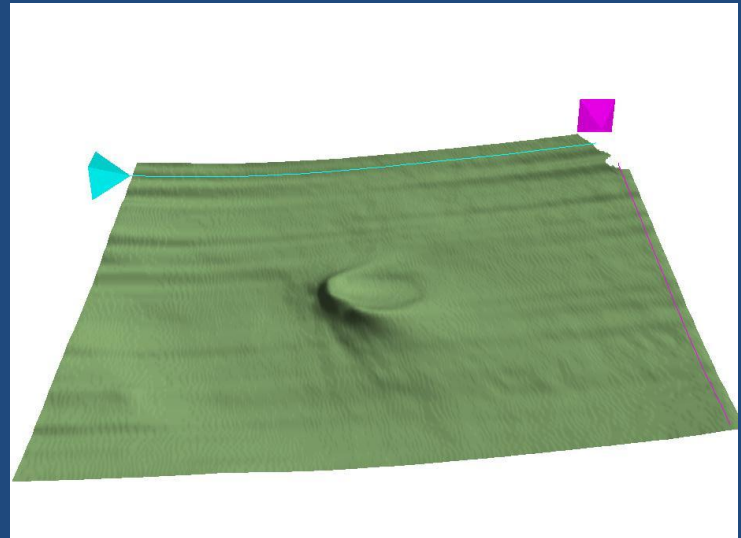
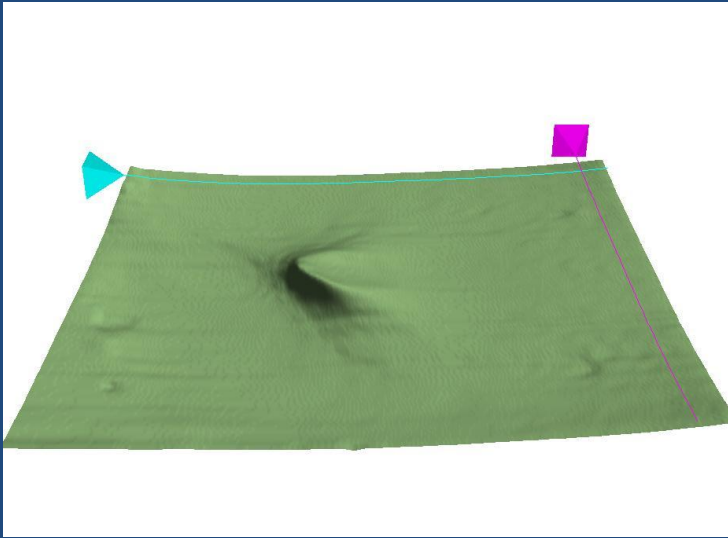
	Central Subfield Thickness um	Volume mm3	Average Thickness um
ILM - RPE	384	12.4	344

Comments

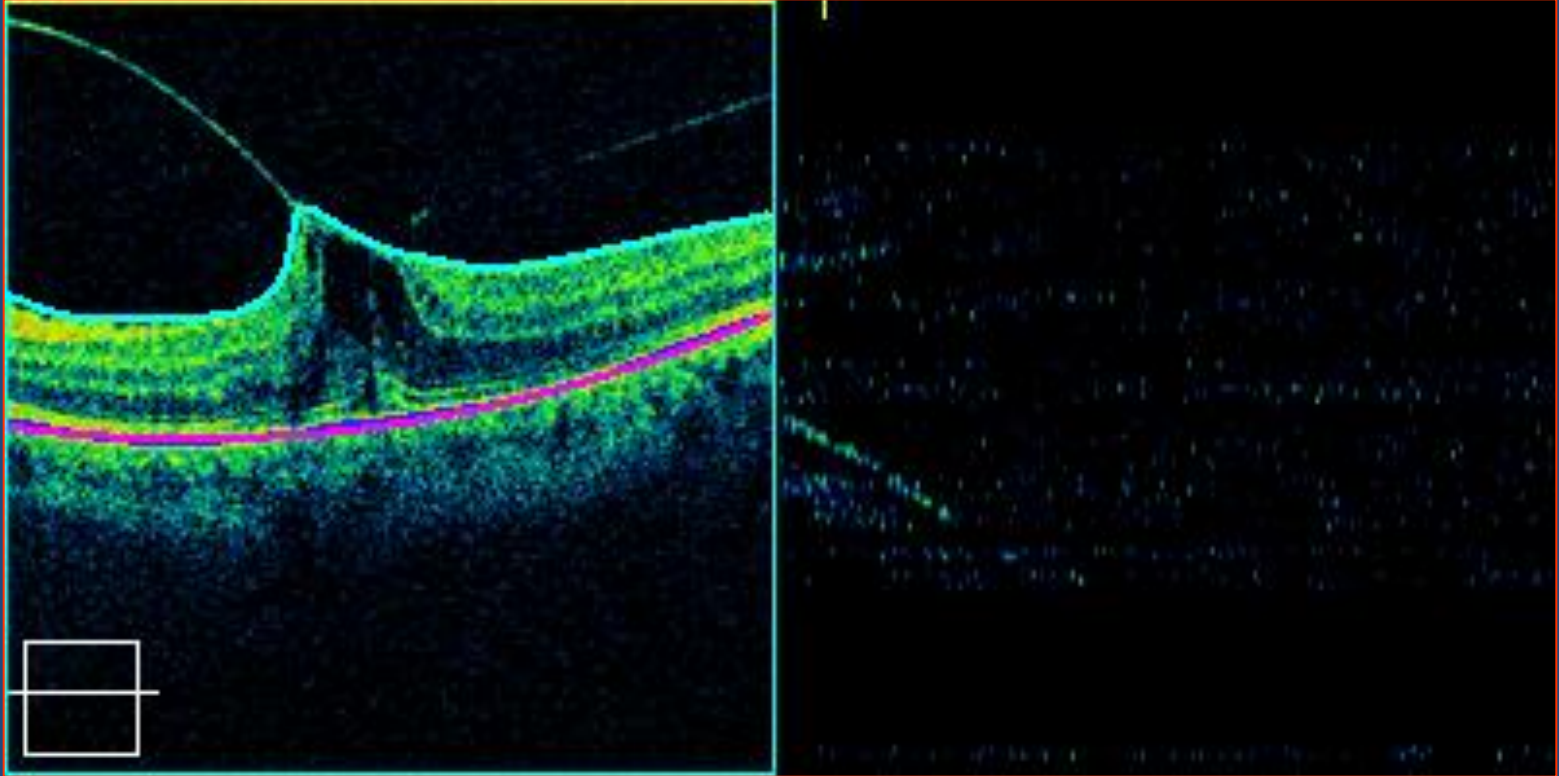
Physician's Signature

SW Ver: 3.0.0.64
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Page 1 of 1

İLM' DA TRAKSİYON ÇİZGİLERİ ARTIŞI



EN FACE = C SCAN = TRANSVERSE =
CORONAL
FOKAL VMT



YAPIŞIKLIĞIN, TRAKSİYONUN KENARLARI, LATERAL UZANIMI
CERRAHİYE ORYANTASYON

MAKÜLA DELİKLERİ

MH / ETYOLOJİ

- İdiopatik (% 90)
- Travma: künt, laser, elektrik, refraktif
- Yüksek Miyopi
- Katarakt ameliyatı, Nd: YAG kapsülotomi
- Diğer:
 - DR, maküler drusen, submaküler cerrahi, dejeneratif makülopatiler, göz içi tümörleri, üveit

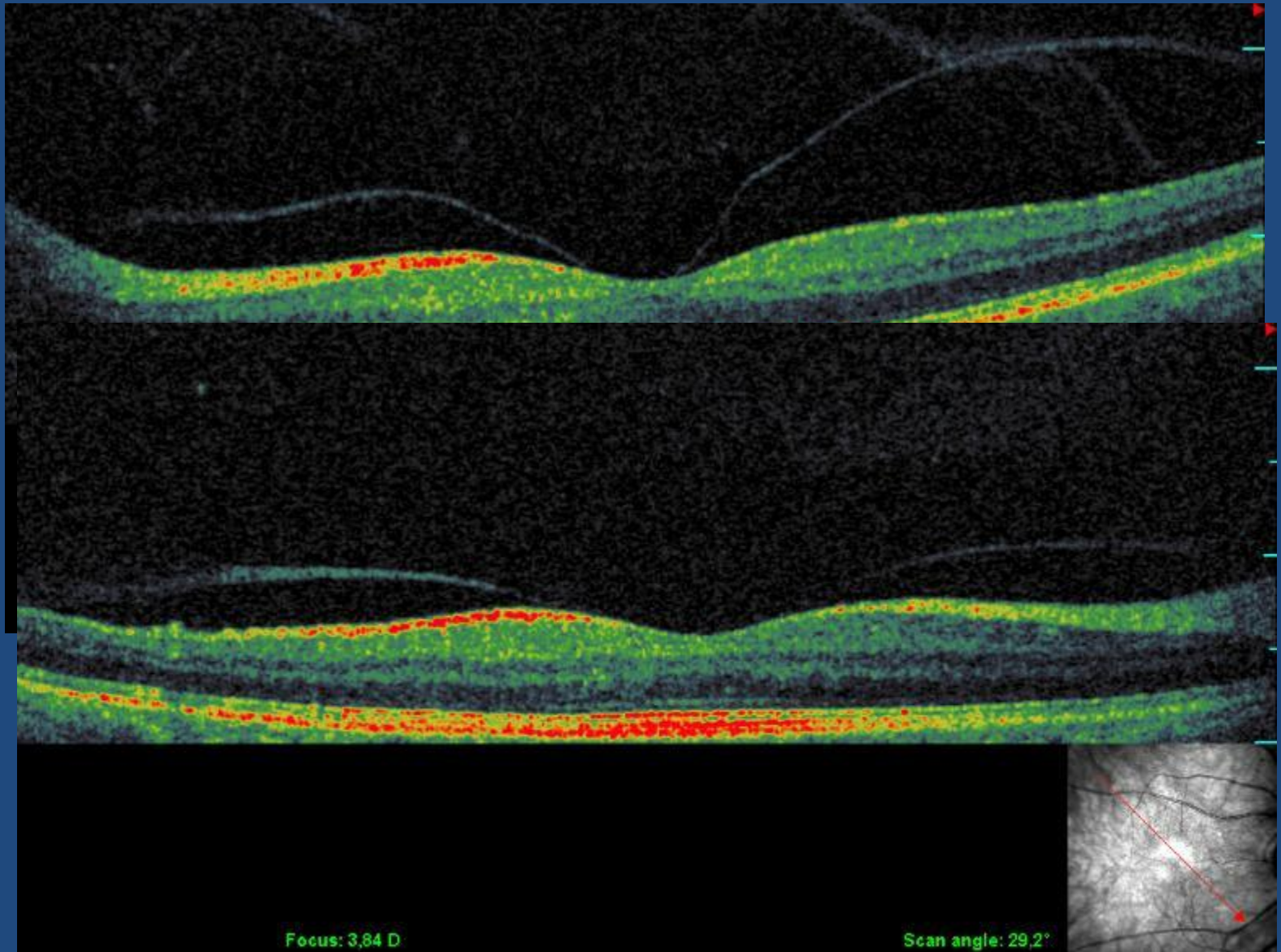
Etyoloji ne olursa olsun, cerrahi ile kapanma oranı % 75' in üzerindedir

Maküler Hole - OCT

- Maküla deliklerinin evrelendirilmesi
- Delik çapı ve çevre maküla ödeminin değerlendirilmesi
- Tam kat maküla deliklerinin; lameller delik, yalancı delik ve kistlerden ayırımı

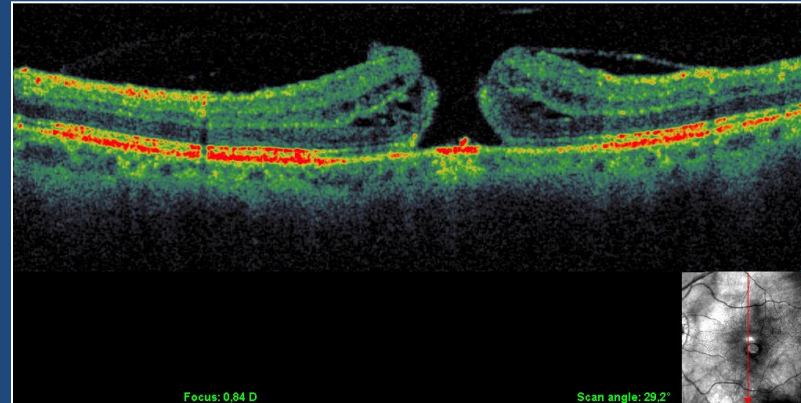
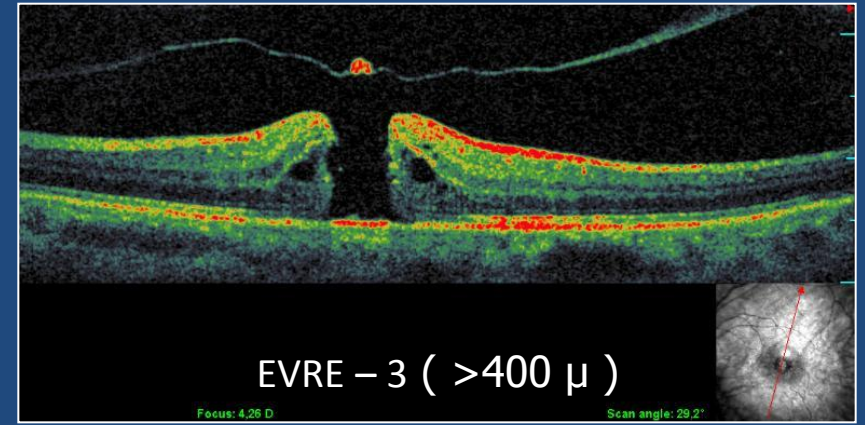
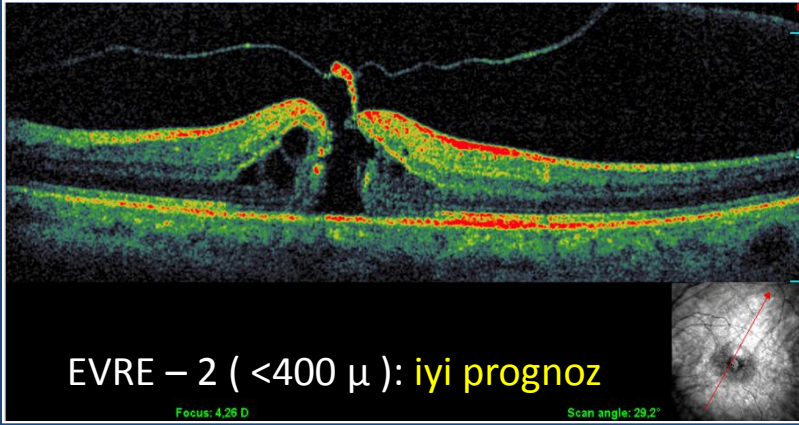
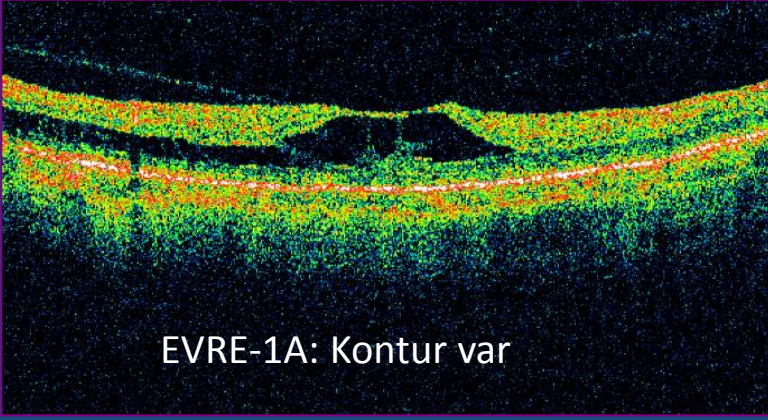
Puliafita CA, et al. Ophthalmology

1995;102:217-29



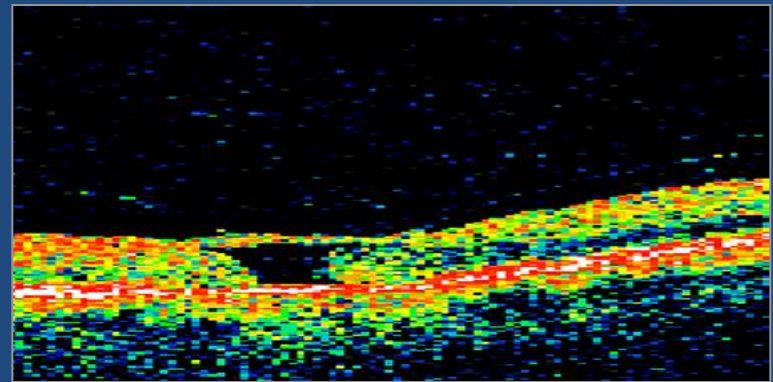
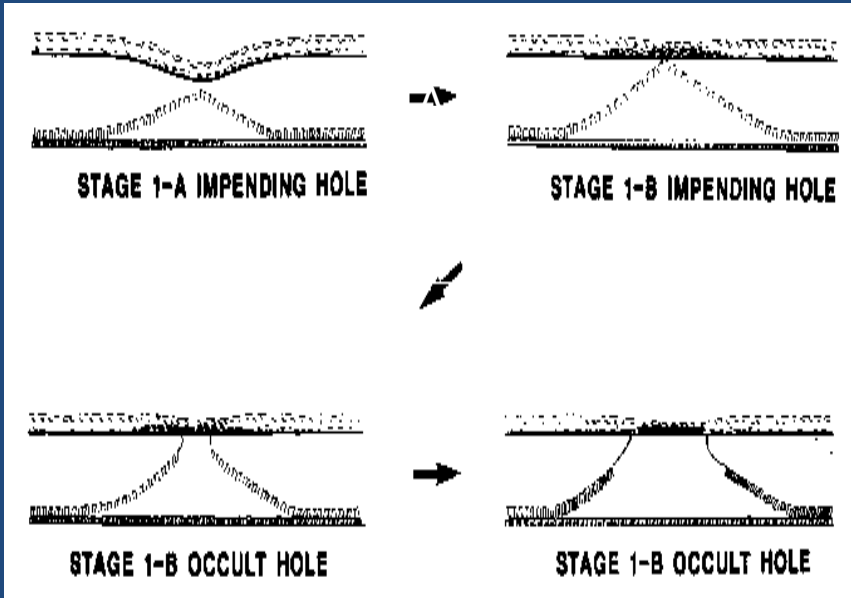
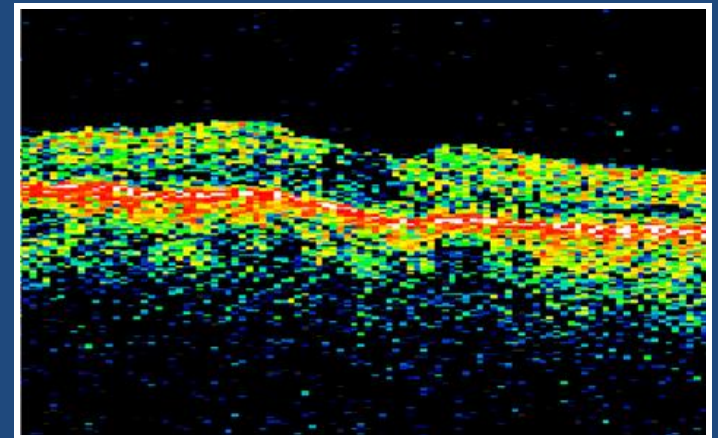
EVRE 0 MAKÜLER HOLE

Maküla Deliği - Evreler

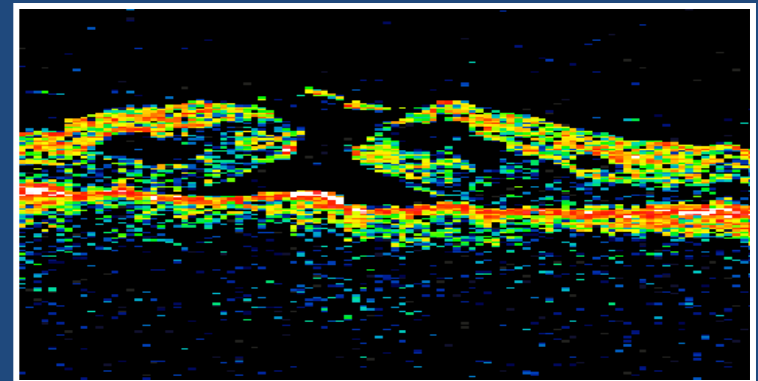


EVRE - 4 HOLE:
Komplet AVD
Hiyaloid görülmez

EVRE-1A

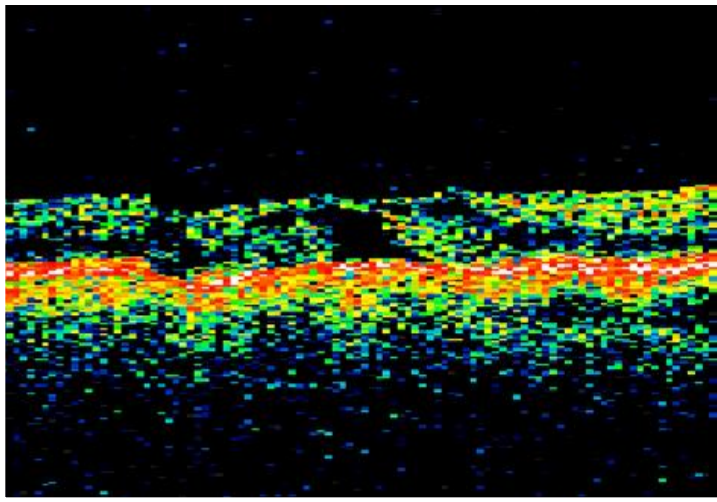


EVRE-1B OCCULT

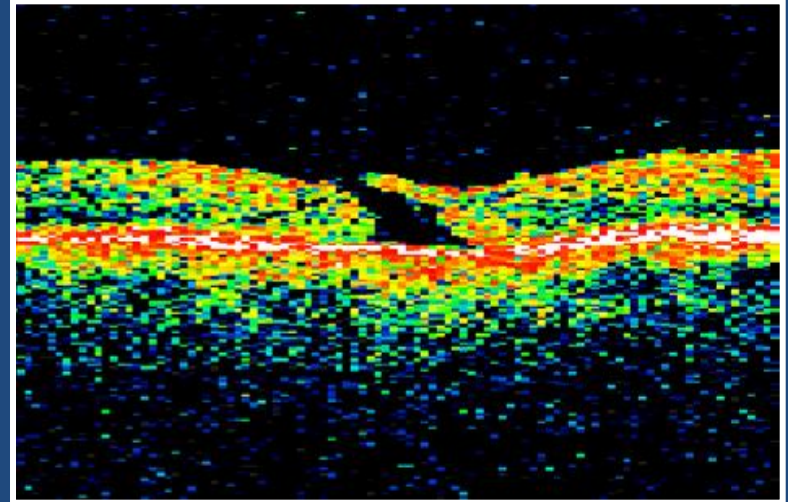


EVRE-2

Tanjansiyel traksiyon



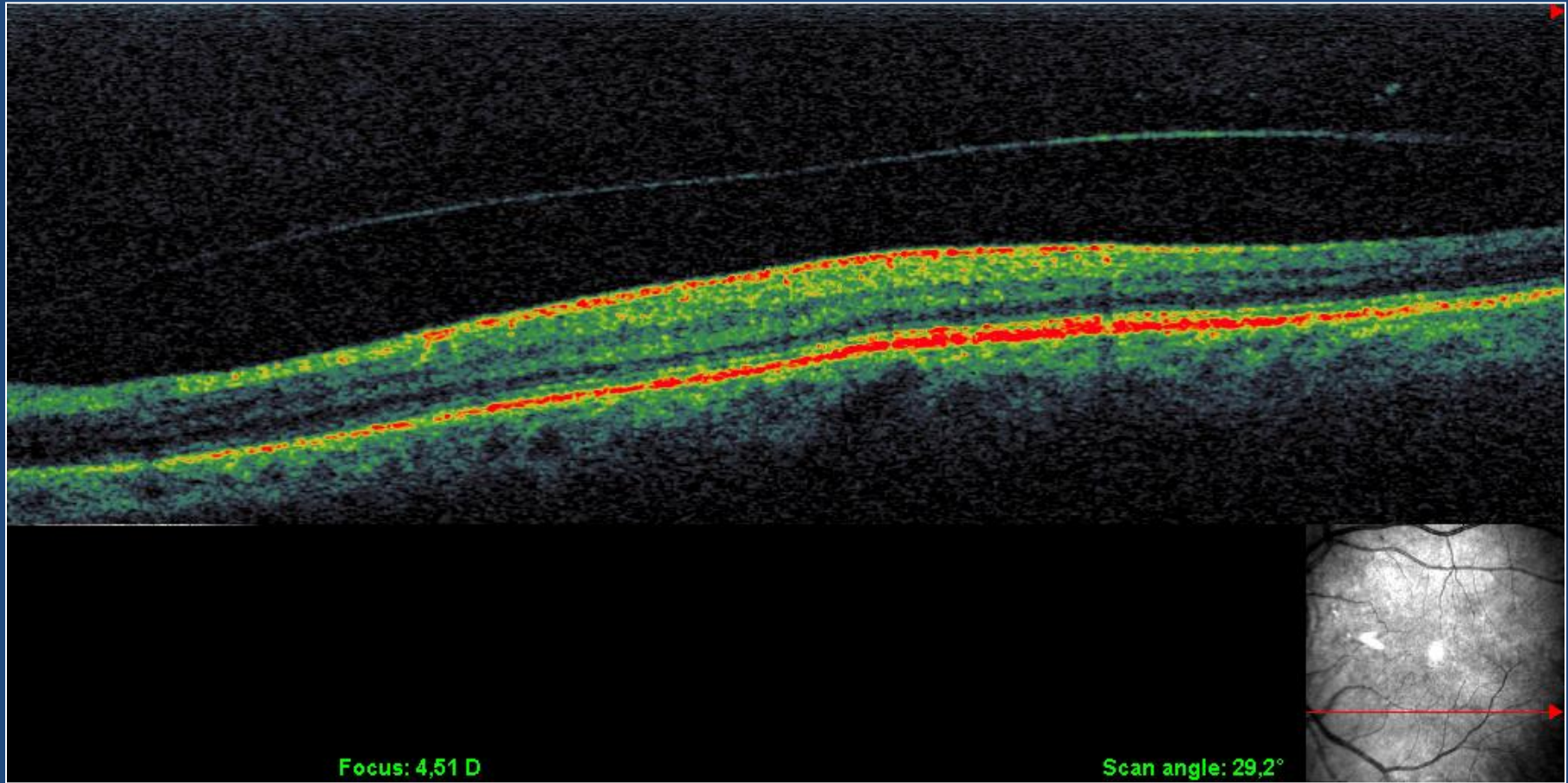
Evre 1B Occult hole
(30.12.2002)



Evre 2
(20.1.2003)

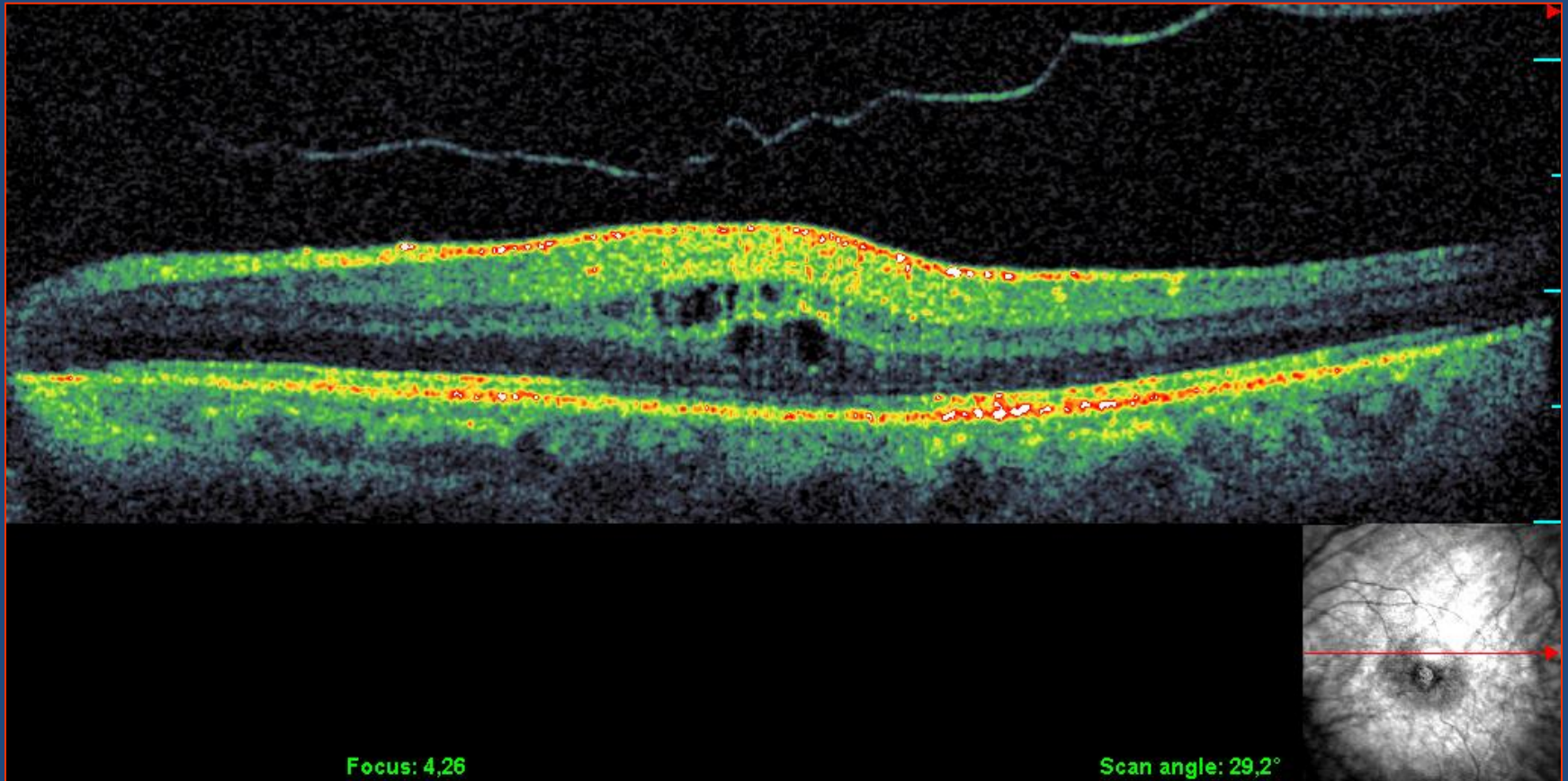
KISMİ PVD / VİTREOFOVEAL TRAKSİYON

Psödokist (Evre - 1) → Evre - 2 hole gelişimi)

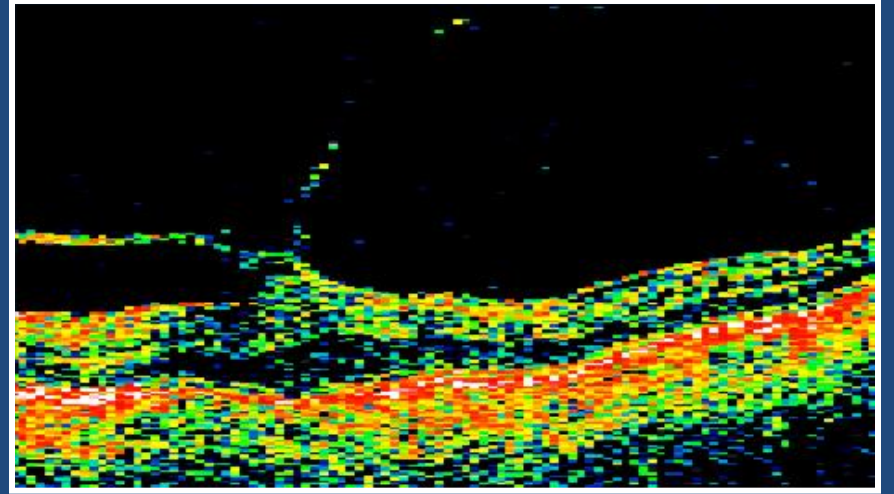
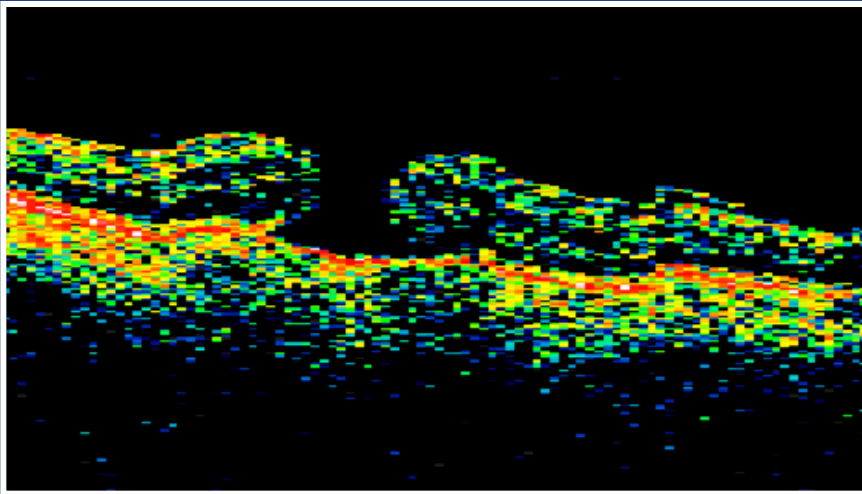
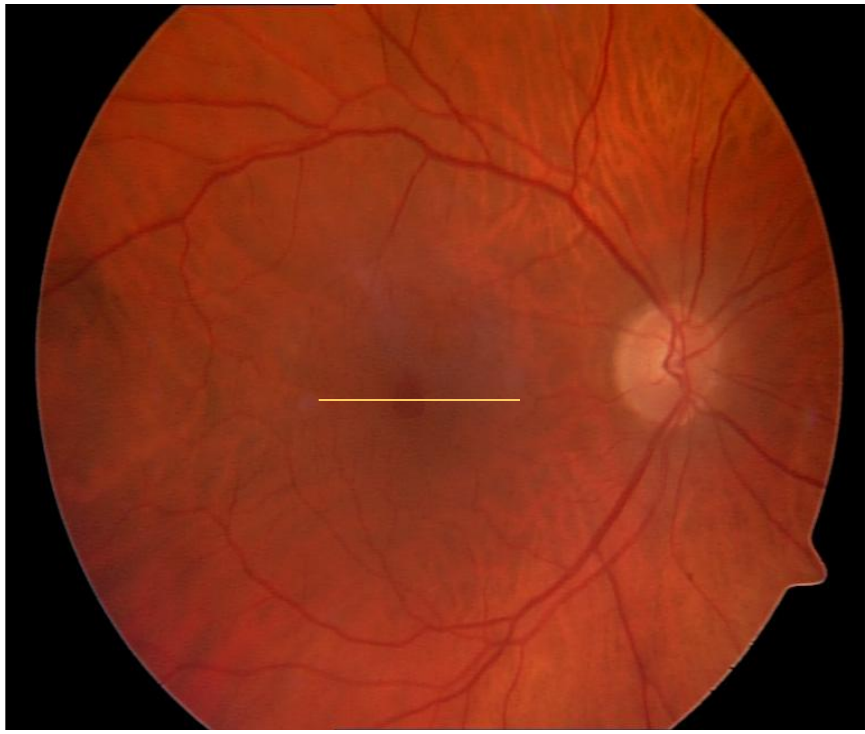


- Arka hiyaloid; ince / zayıf / kesik kesik yansıtıcıdır
- Tam AVD'ı retinadan 1 – 2 mm' den fazla uzakta ise OCD' de görülmez

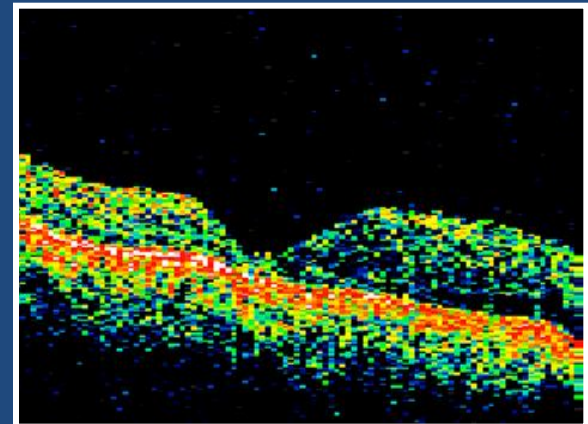
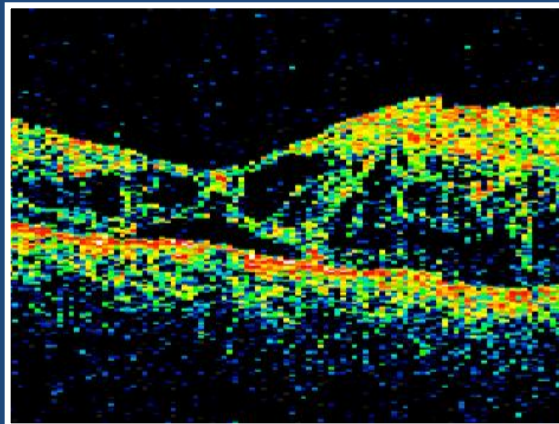
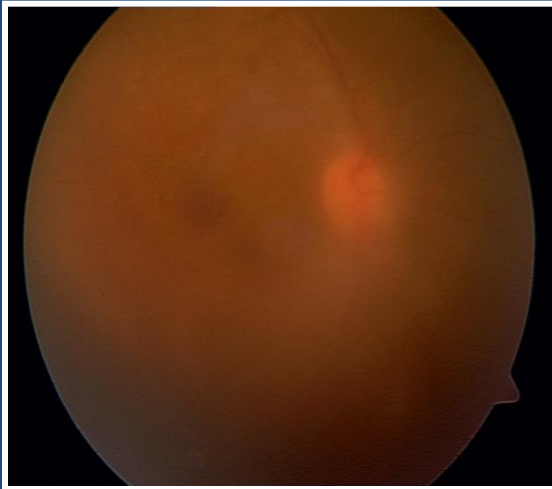
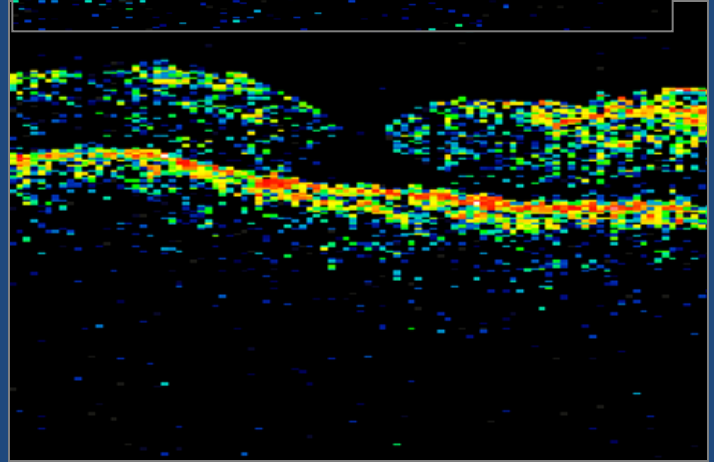
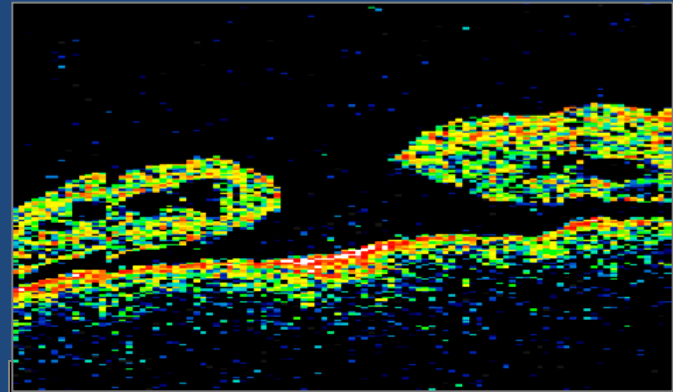
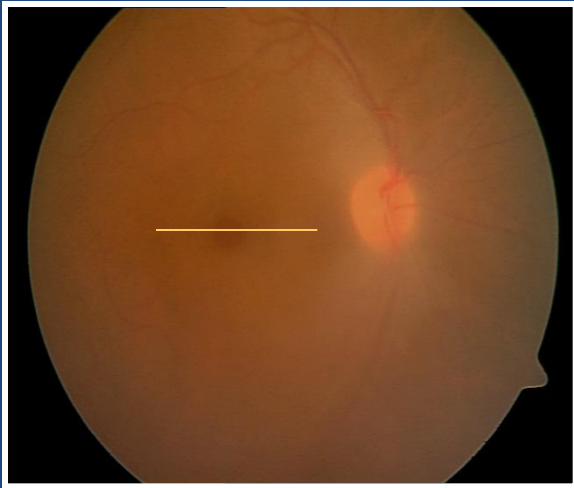
FOKAL VMT- MAKÜLER HOLE



Neden VMT? Neden Maküler hole ?



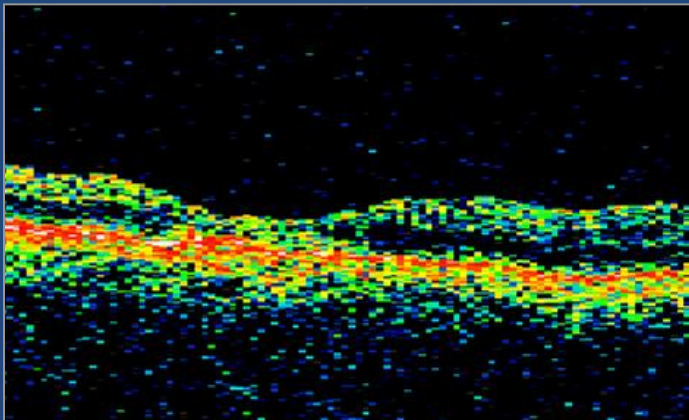
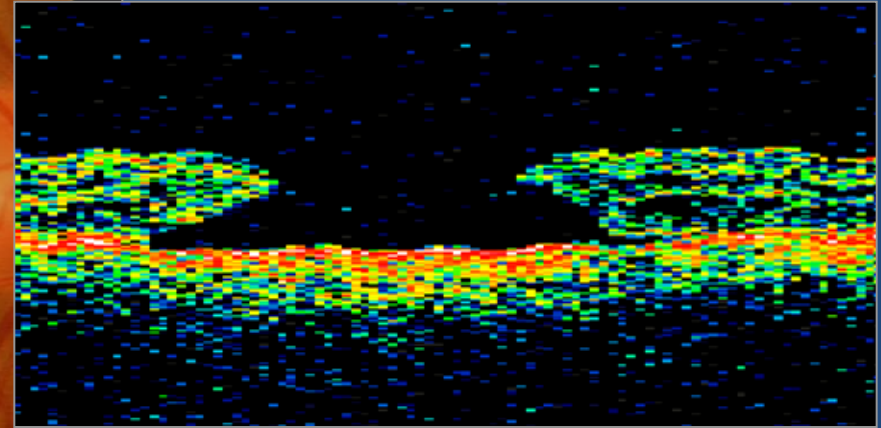
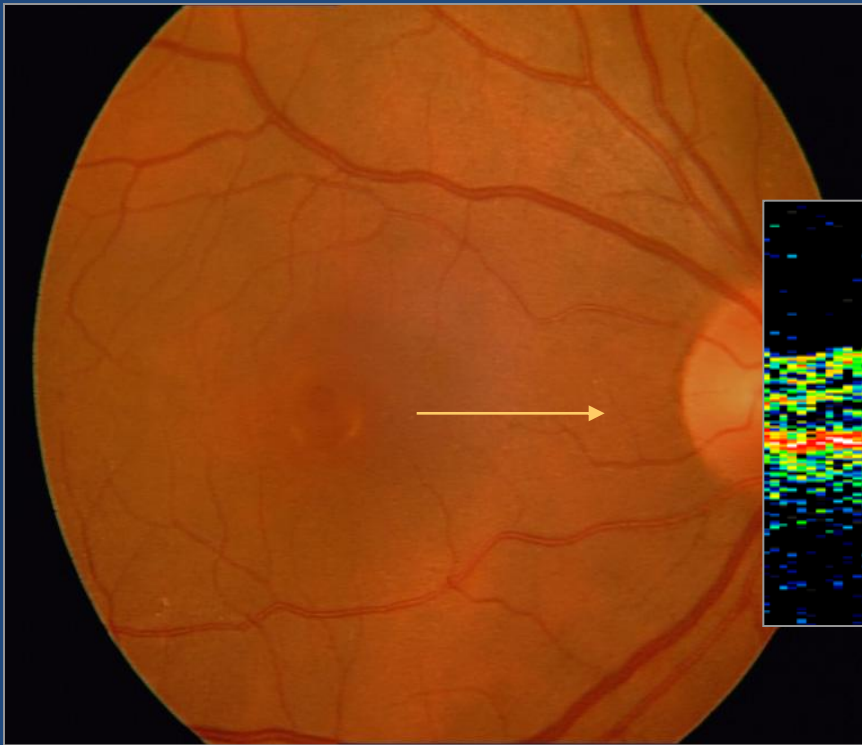
Foveolada yapışıklık



SPONTAN KAPANMA

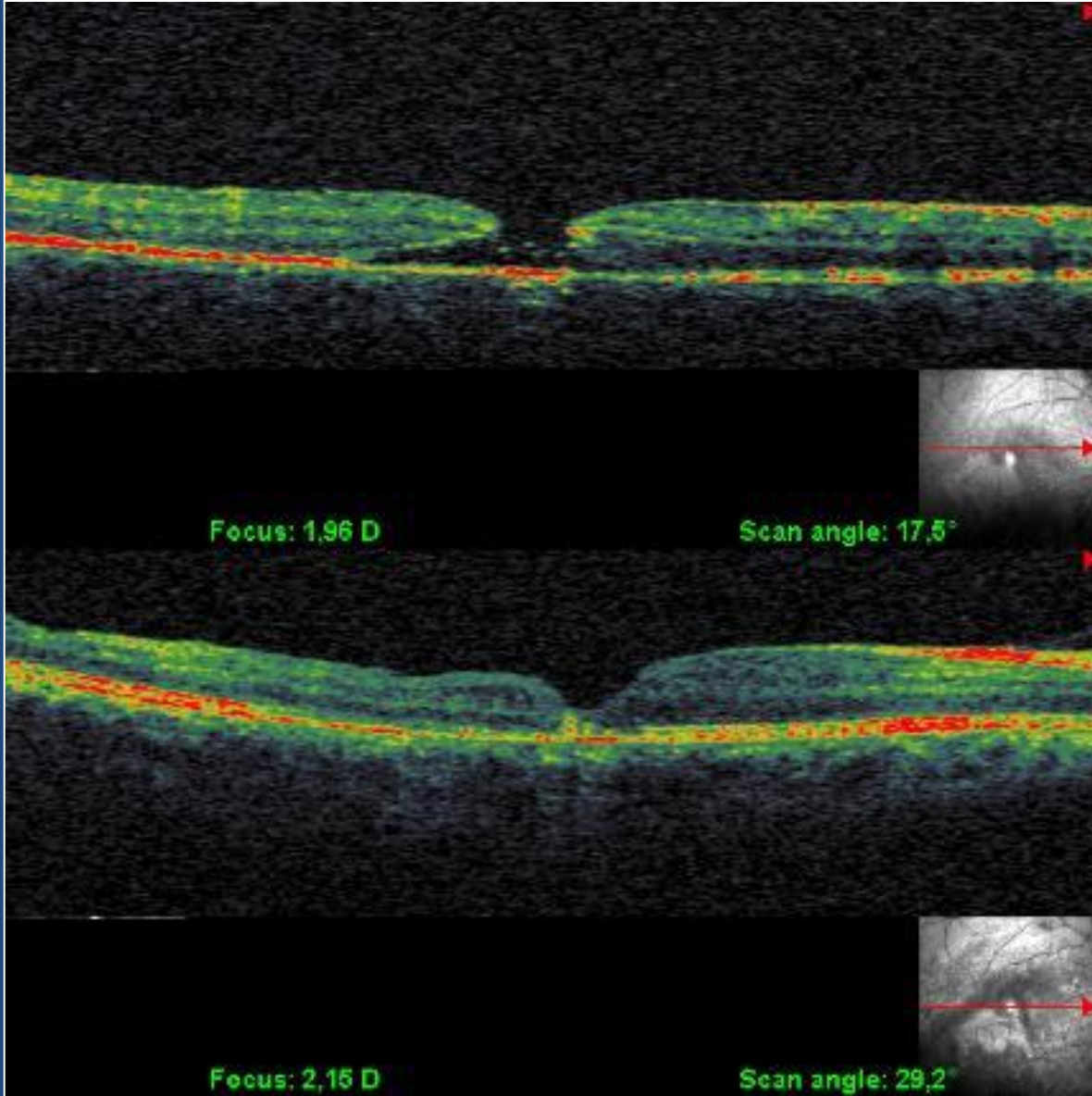
MAKÜLER HOLE OCT İLE REHBERLİK / PROGNOZ

- 400 mikron' dan küçük hollerde prognoz iyi
- >400 mikron: 5 gün sıkı yüzaşığı pozisyon
<400 mikron: 5 gün gevşek yüzaşığı pozisyon
- <500 mikron: % 20 SF6
>500 mikron: % 14 C3F8
- Hole kenarında ödem, kistik değişiklikler, retinal katlarda atrofi ----- **kötü prognoz**
- Hole kenarı altında IS / OS devamlılığı ----- **iyi prognoz**



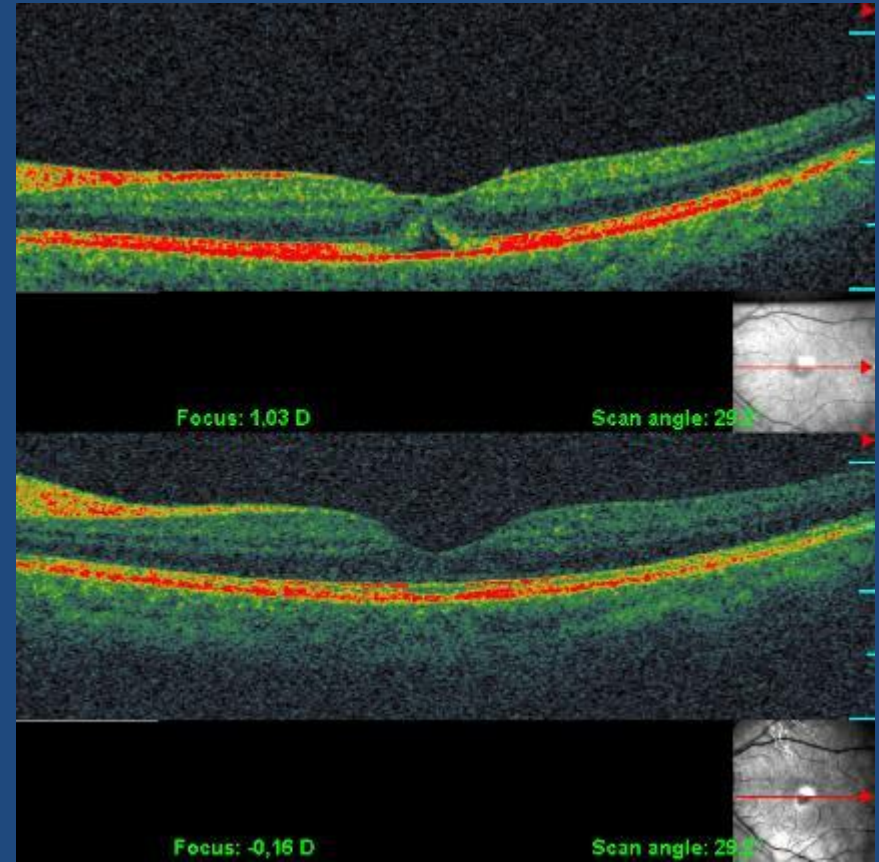
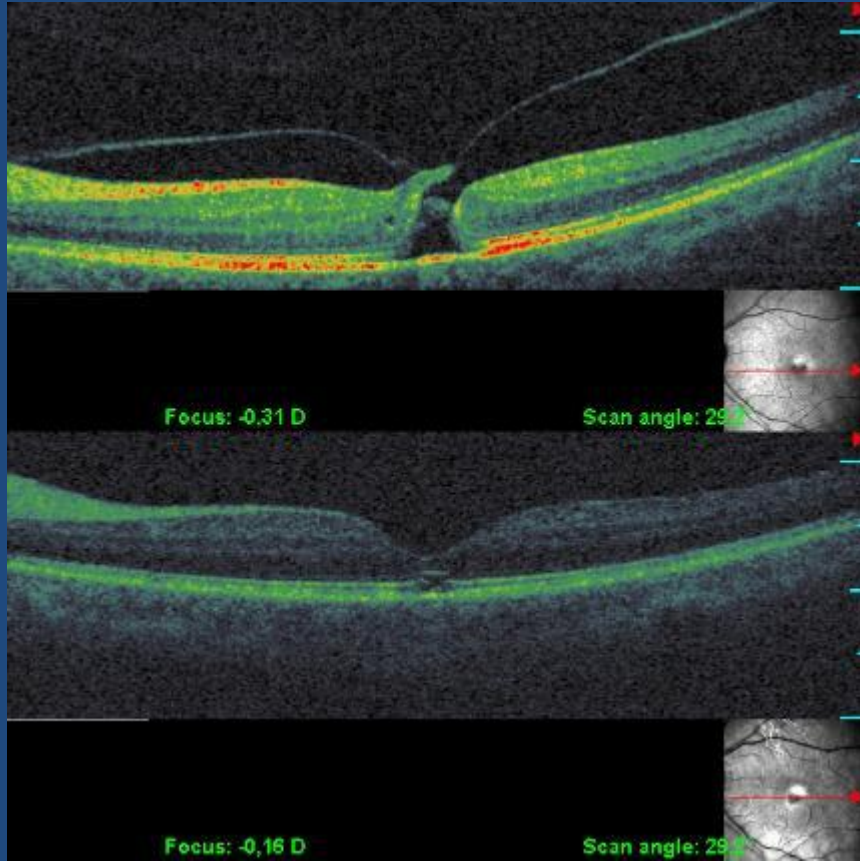
Postop
2. gün

TRAVMATİK MAKÜLA DELİĞİ



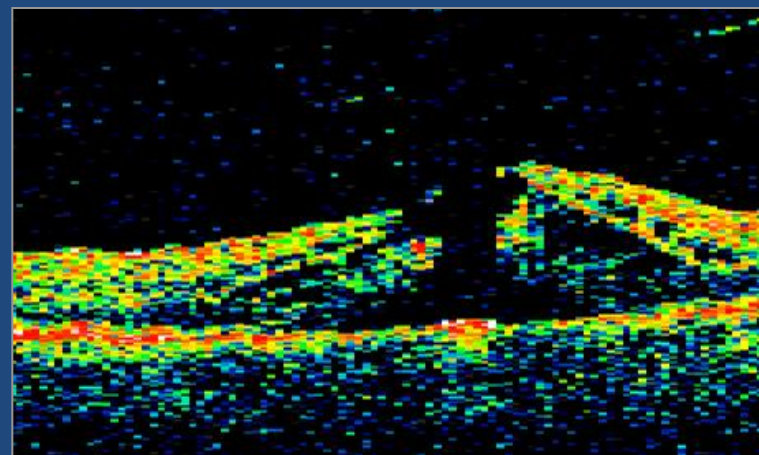
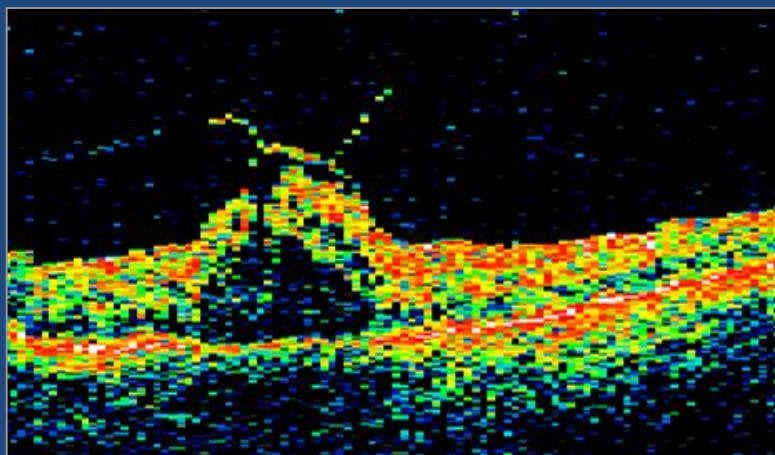
AMELİYAT ÖNCESİ: 5MPS

AMELİYAT SONRASI: 0.9

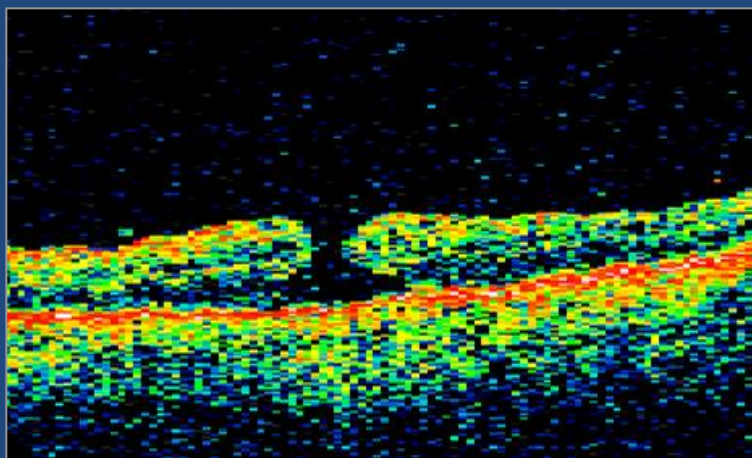


HOLE CERRAHİSİNDEN SONRA SUBFOVEAL SIVI

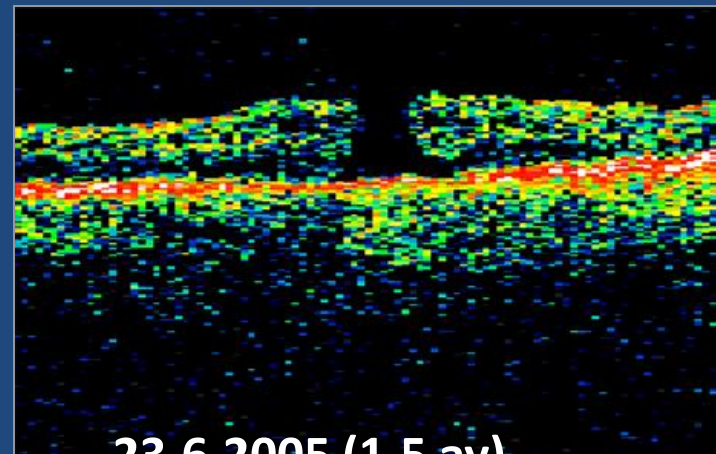
VMT – Maküler hole



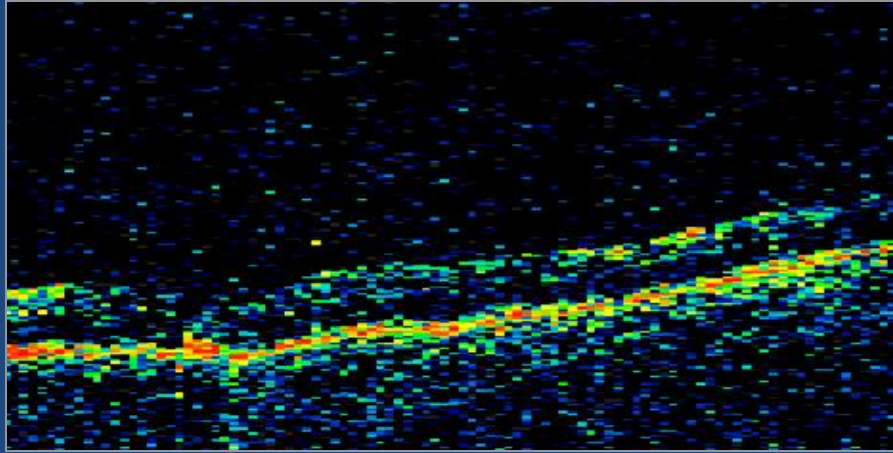
Preop – 2.5.2005



23.5.2005 (20.gün)
Silikon - Delikte küçülme

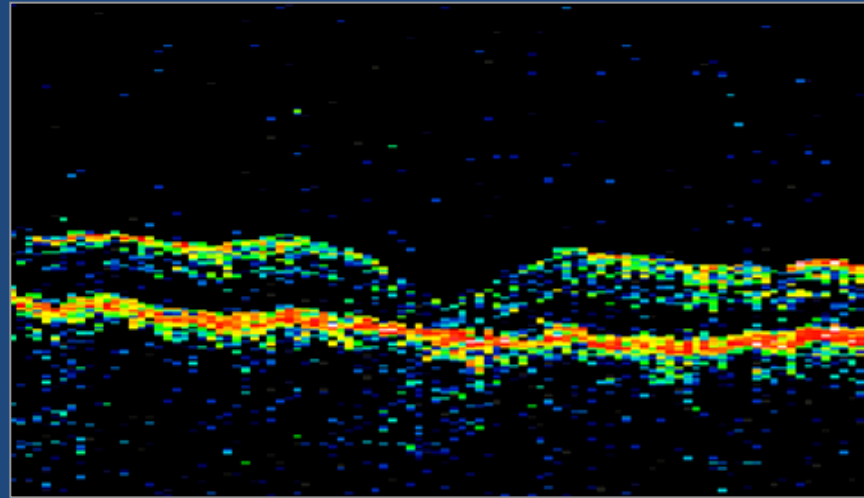


23.6.2005 (1.5 ay)
Proliferasyon - Delikte genişleme



19.8.2005 (3.5 ay)

Silikon & nüks membranının alınması



22.8.2005: Cerrahiden sonra normal foveal kontur

SONUÇ

Vitreoretinal arakesit patolojisi düşünölen hastalarda

- Özellikle Spectral = Fourier = High speed OCT çok yararlıdır
- Cerrahi kararında zamanlama ve prognoz tayini için, retina içi tabakalar analizine dikkat edilmelidir.



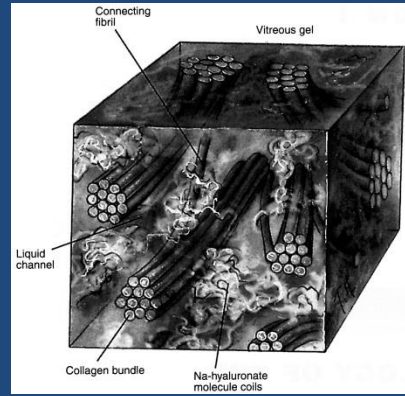
VİTREOMAKÜLER TRAKSİYON SENDROMU

Dr. Emin ÖZMERT

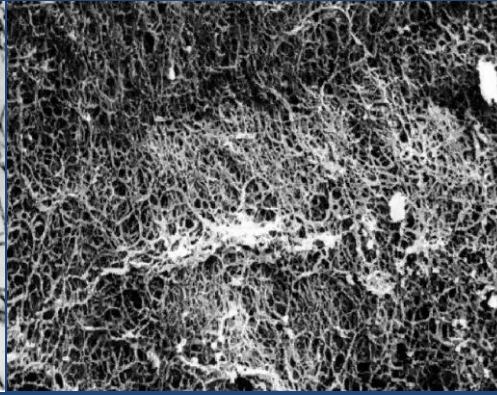
Ankara Üniversitesi

Vehbi Koç Göz Hastanesi

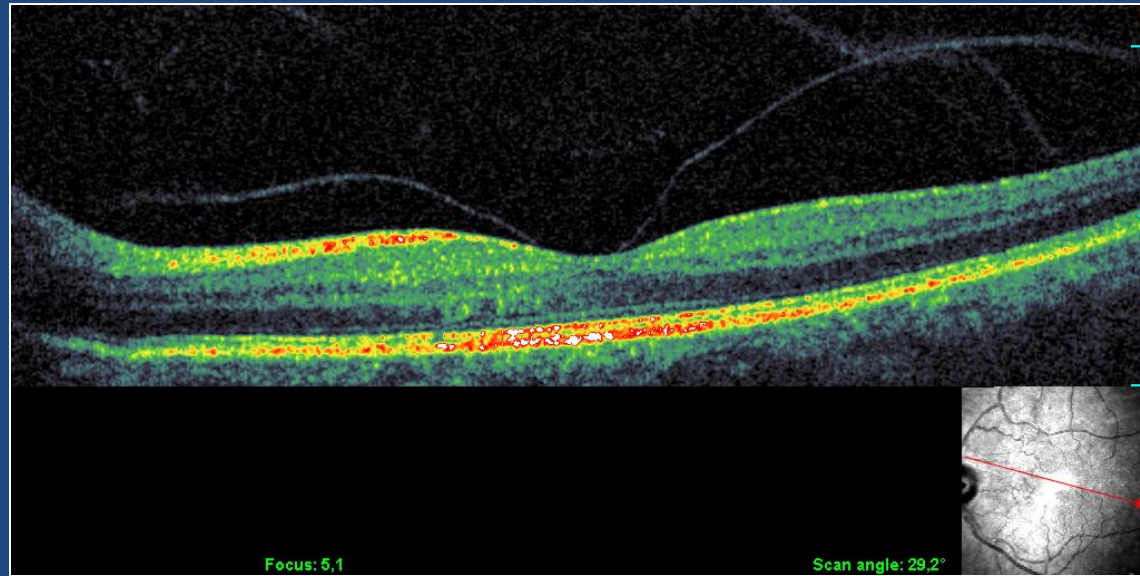
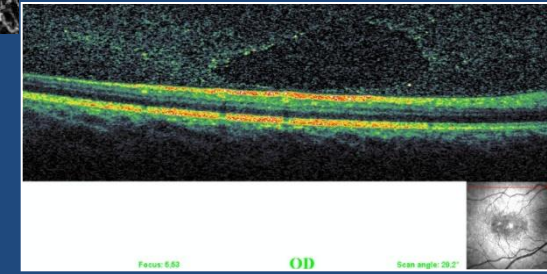
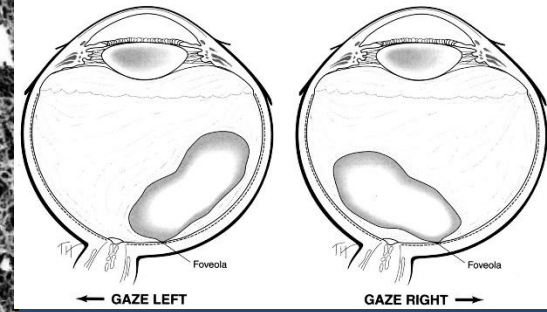
34. TOD Nisan Kursu – 2014 / Ankara



Vitreus tabanı



Kortikal vitreus



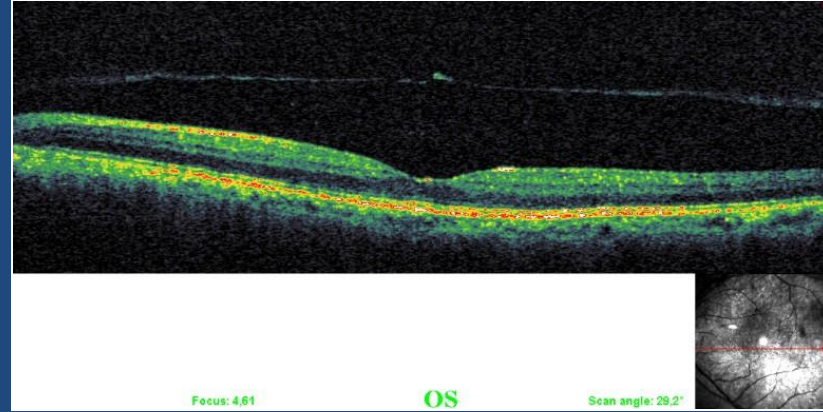
Yaşlanma
 Sinkizis: sıvılaşıma
 Sinerezis: jelin kollapsı
 Anormal arka vitreus dekolmanı



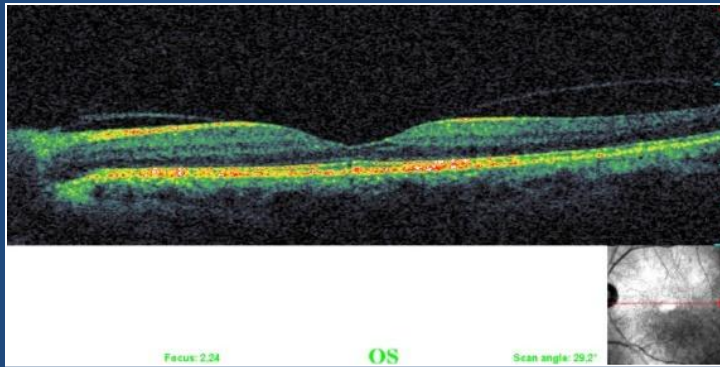
Vitreo-retinal arakesit hastalıkları

Vitreo-retinal arakesit hastalıkları

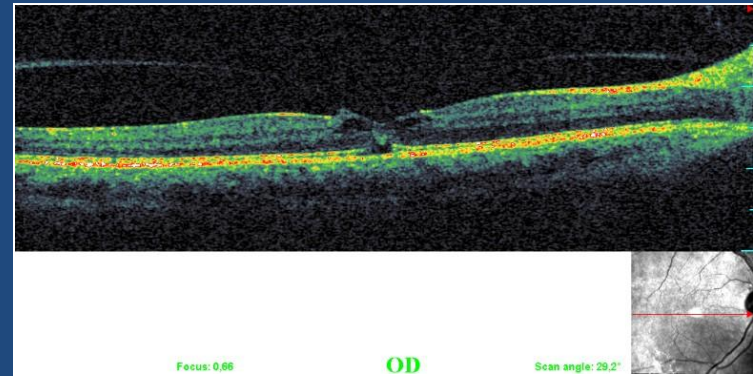
- Vitreo-retinal yapışıklıklarda aynı anda yeterli ayrılma :
ideal total PVD



- Vitreusun sıvılaşması ile vitreo-maküler adezyon arasında dengesizlik --- **anormal PVD**: Genetik , kazanılmış nedenler

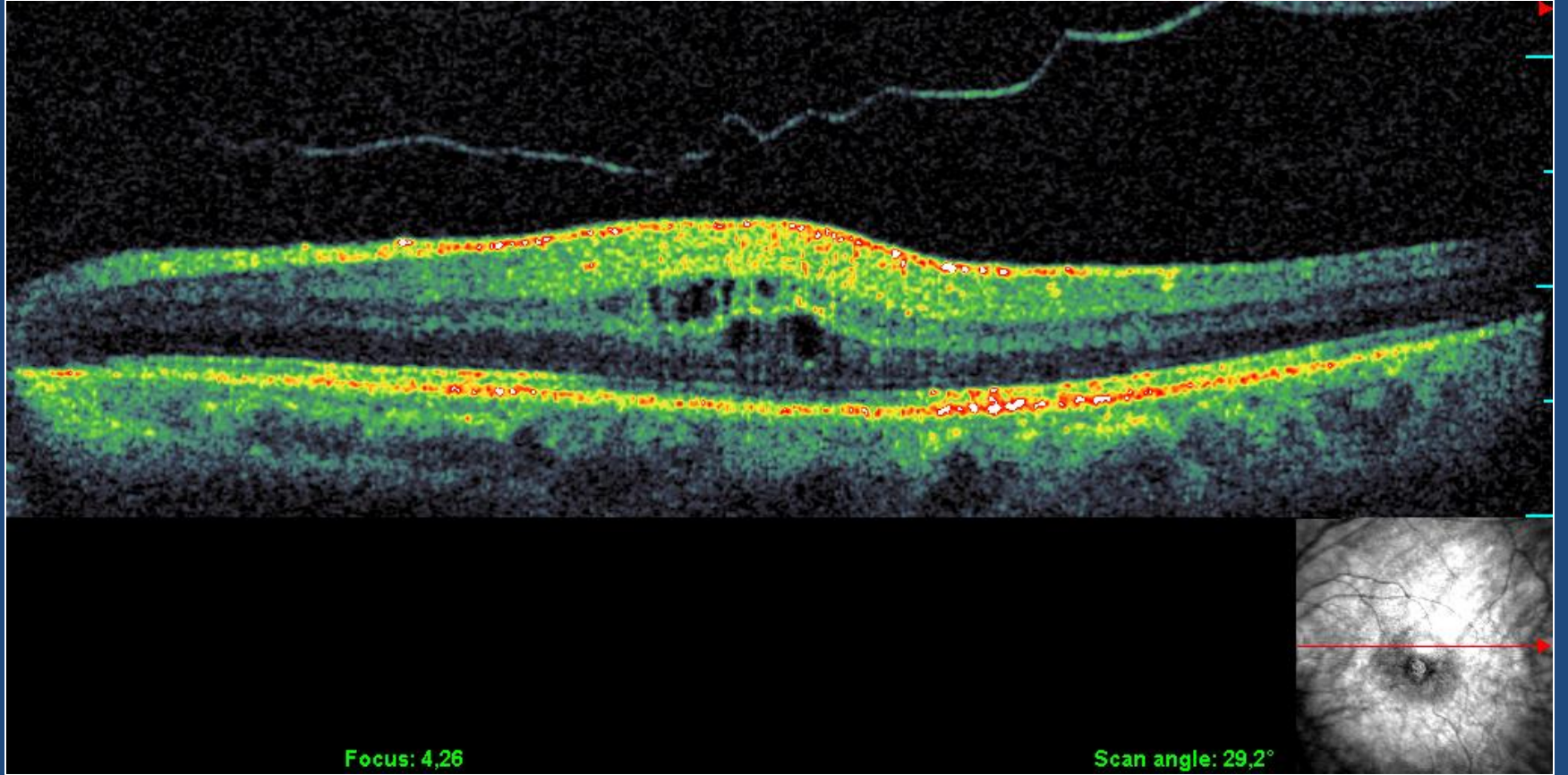


Vitreo-maküler adezyon



Vitreo-maküler traksiyon

Neden farklı patolojiler gelişir ?

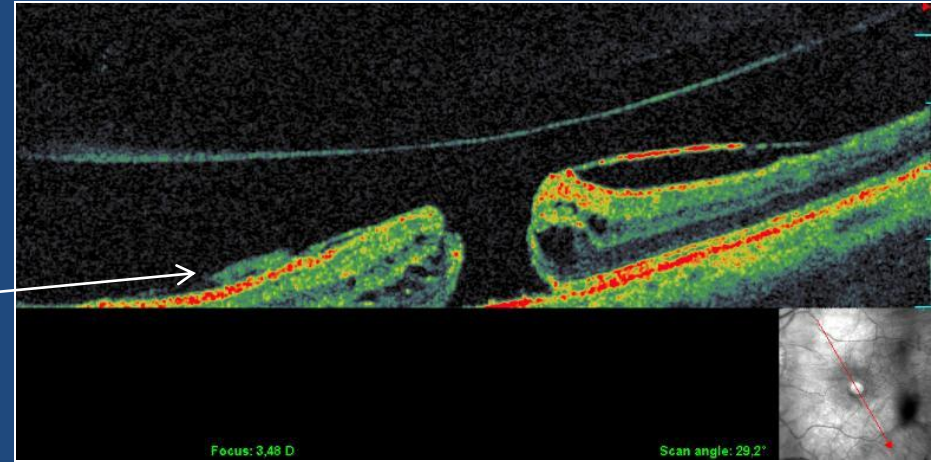


VMT, Epimaküler membran, Maküler hole

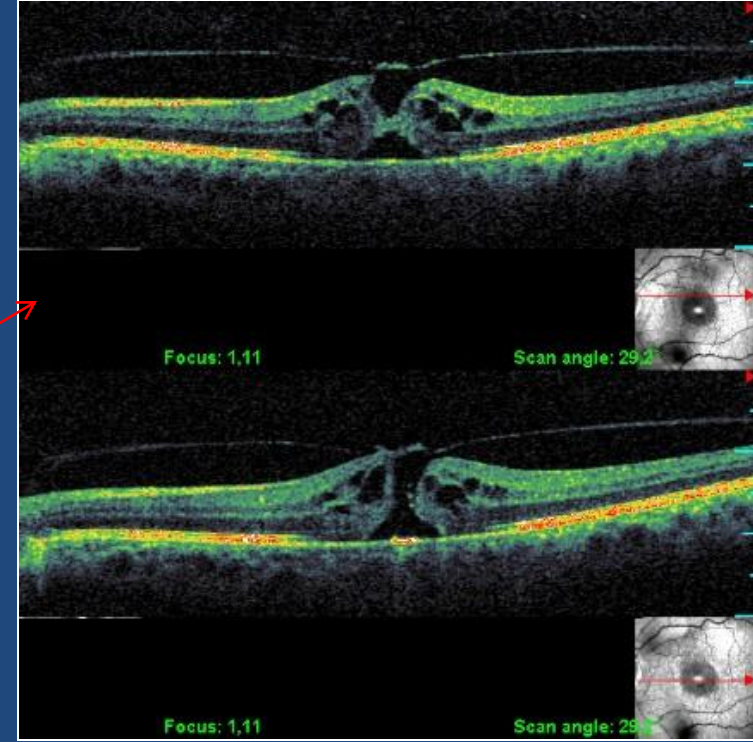
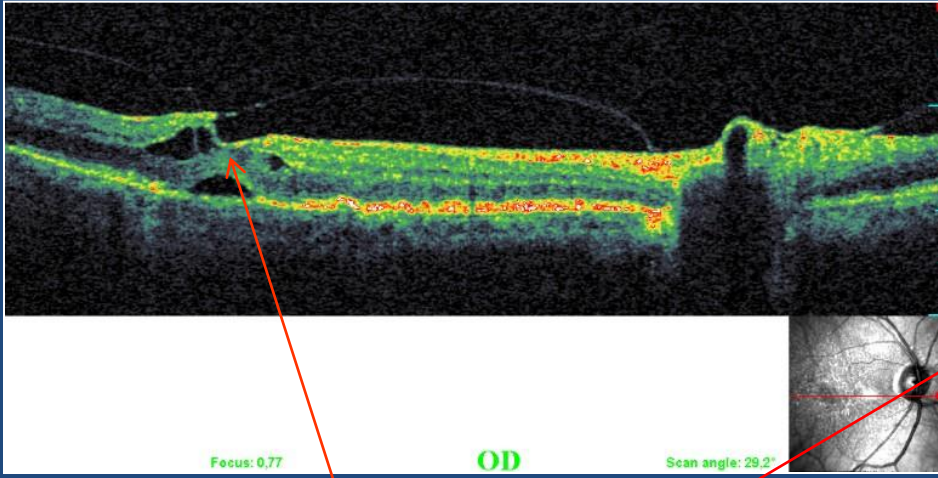
Neden VMT, ERM, hole ?

- Kortikal vitreusun tam kalınlıklı inkomplet ayrılması:
 - * Periferik ayrılma, posterior traksiyon: **VMT, VPT**
- Kortikal vitreusun kısmi kalınlıklı (lameller) ayrılması:
 - * VPA var: **maküler hole**
 - * VPA yok: **Epiretinal membran**

Vitreoskizis
Hiyalositler , glia
hücreleri çoğalır

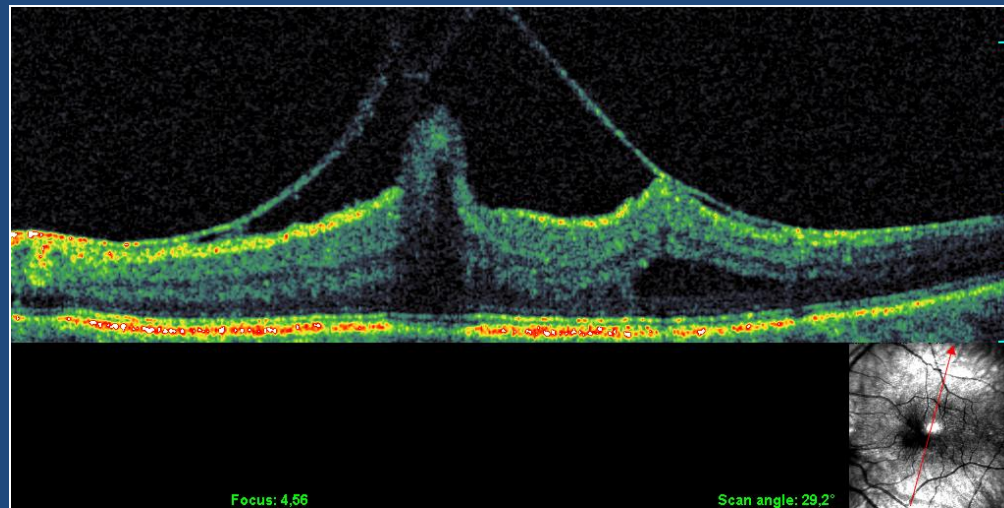


Çekinti vektörünün yönü

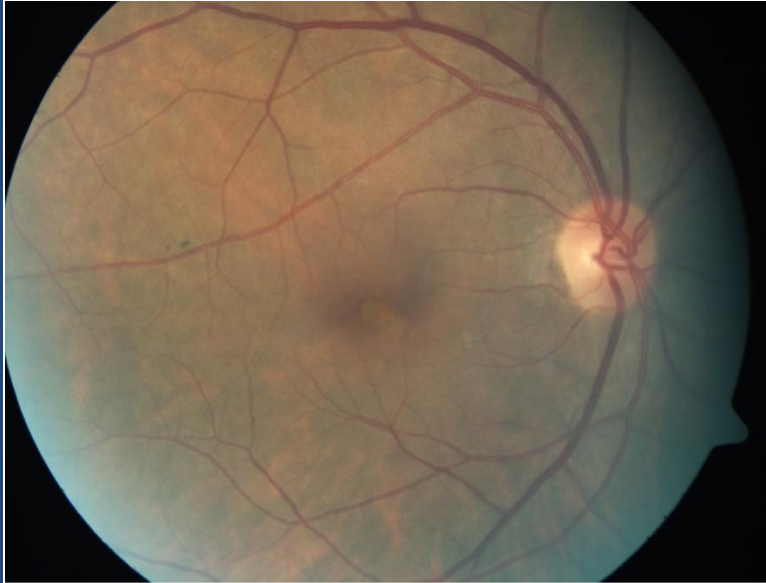
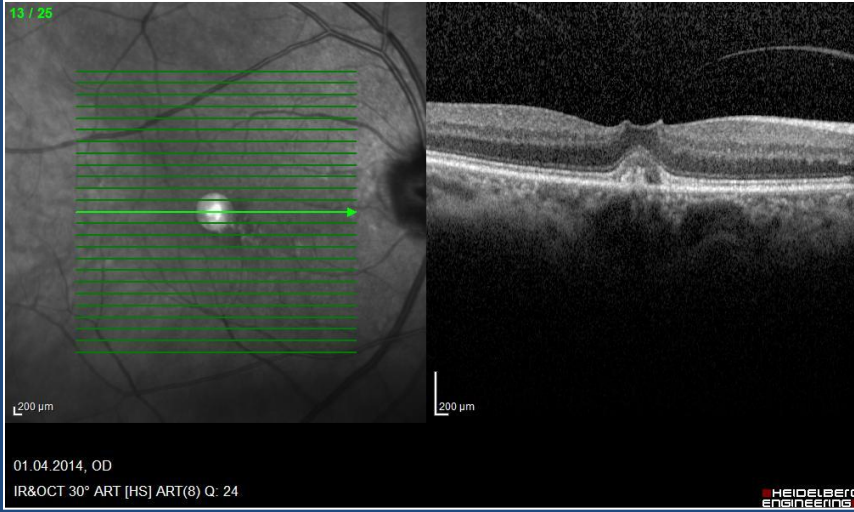


Diske yapışıklık varsa : dışa doğru tanjansiyel vektör
Maküla deliği

Diske yapışıklık yoksa:daha dik vektör
Vitreo-maküler traksiyon



Vitreo-maküler traksiyon sendromu-1



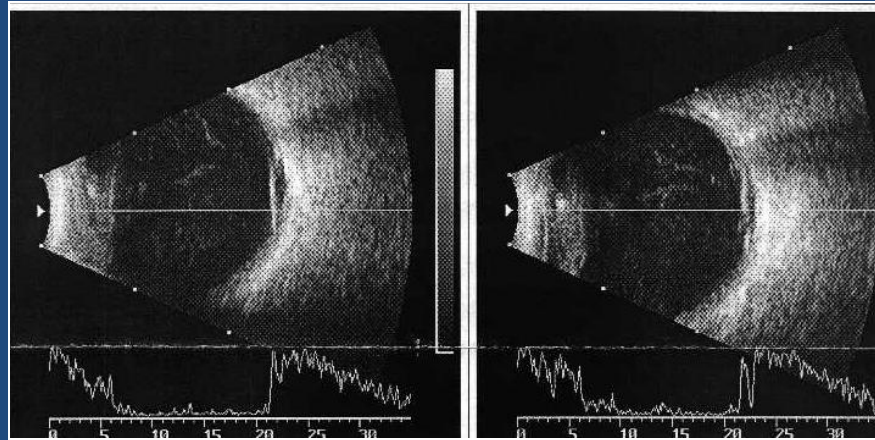
- Kadın, 60 – 70 yaşlarda sık
- **Anormal inkomplet PVD + makülaya persistan vitreus adezyonu**
- Sıklıkla diske ve arkadlara da yapışıklık
- Oluşan ön – arka çekinti ile:
 - * Makülada kalınlaşma, ödem, kistler
 - * Lameller / tam maküler hole
 - * Fovea dekolmanı
 - * Progresif görme azalması

Vitreo-maküler traksiyon sendromu-2

- **Biyomikroskopi:**

- * Perifoveal ring şeklinde retinal kıvrım

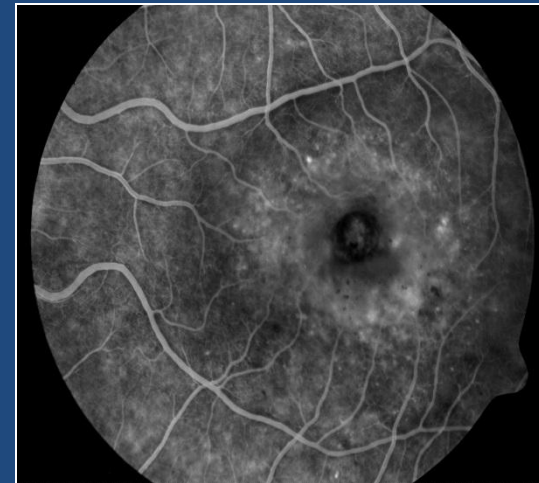
- * Disk nazali – temporal maküla arası oval vitreus yapışıklık alanı



- **FFA:**

- * Disk damarlarından sızıntı,
makülada boya göllenmesi

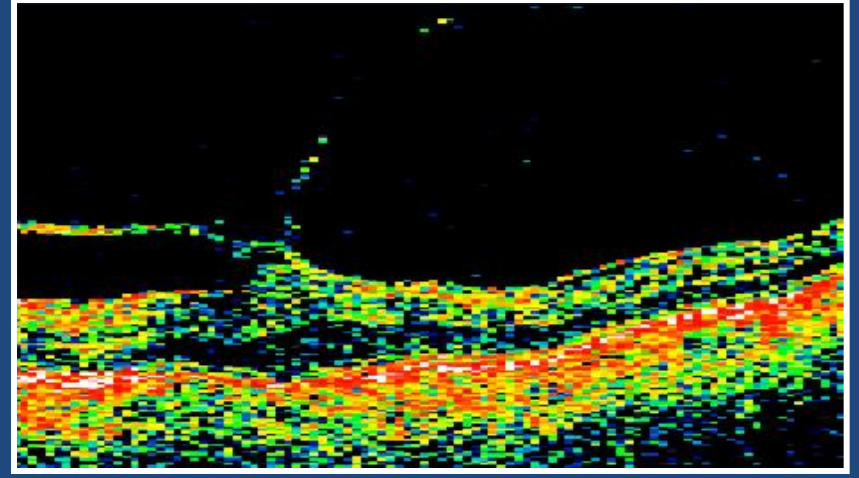
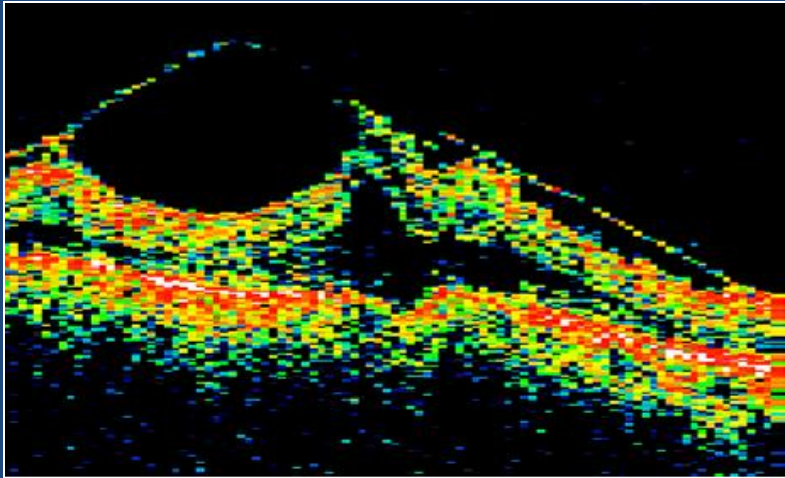
- * Damarlarda distorsiyon



Vitreo-maküler traksiyon sendromu-3



Tanı için sadece fundus muayenesi yeterli değil



OCT çok önemli

Vitreo-maküler traksiyon sendromu-4

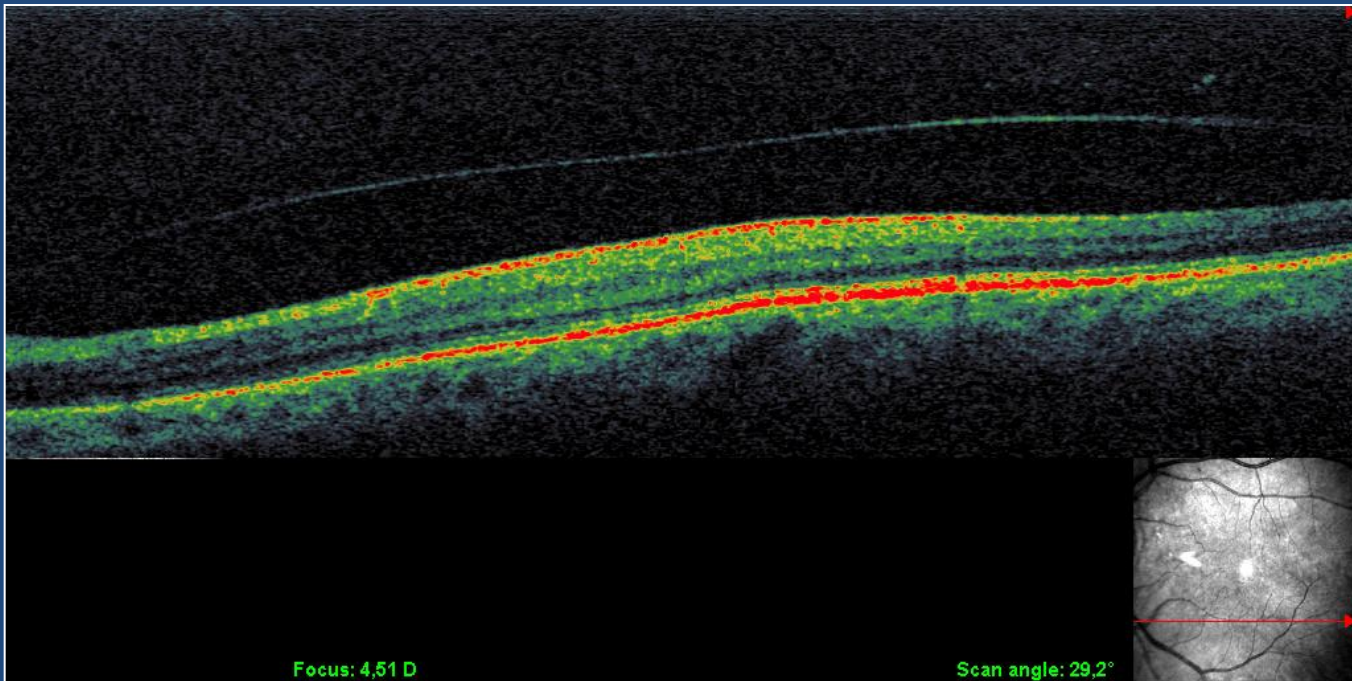
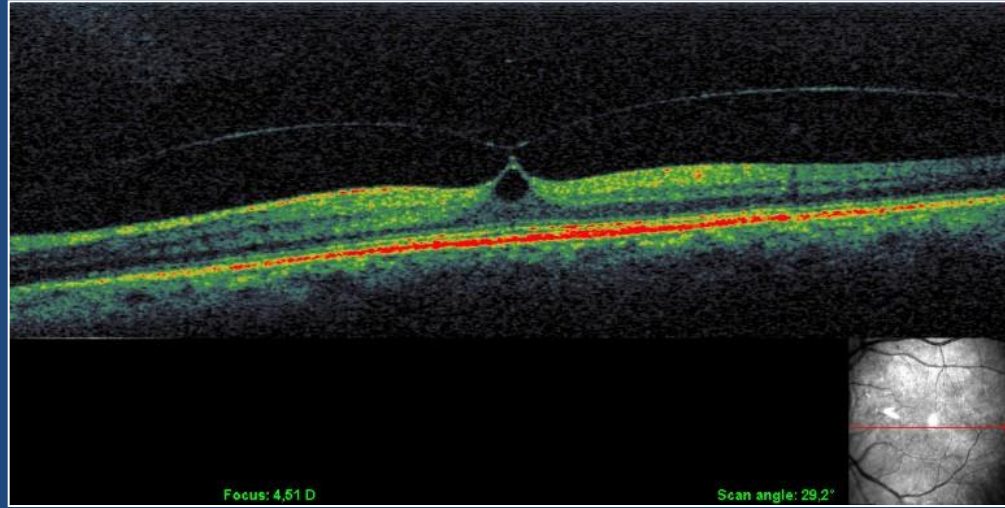
Tabii gidiş

- Arka kortikal vitreusun maküladan spontan ayrılması:
 - * 8-15 ayda spontan ayrılma % 11 – 47 (Odrobina, Hikichi)
 - * % 22' sinde OCT bulguları normal (8 ay takip)
 - * Çoğunda makülada bazı dejeneratif sekeller kalır
- Genellikle görmede hızlı kötüleşme
- VMT + tam kalınlıklı maküla deliği varsa:
 - * % 3 – 11 holün spontan kapanması
 - * % 78' inde ileri evrelere geçiş

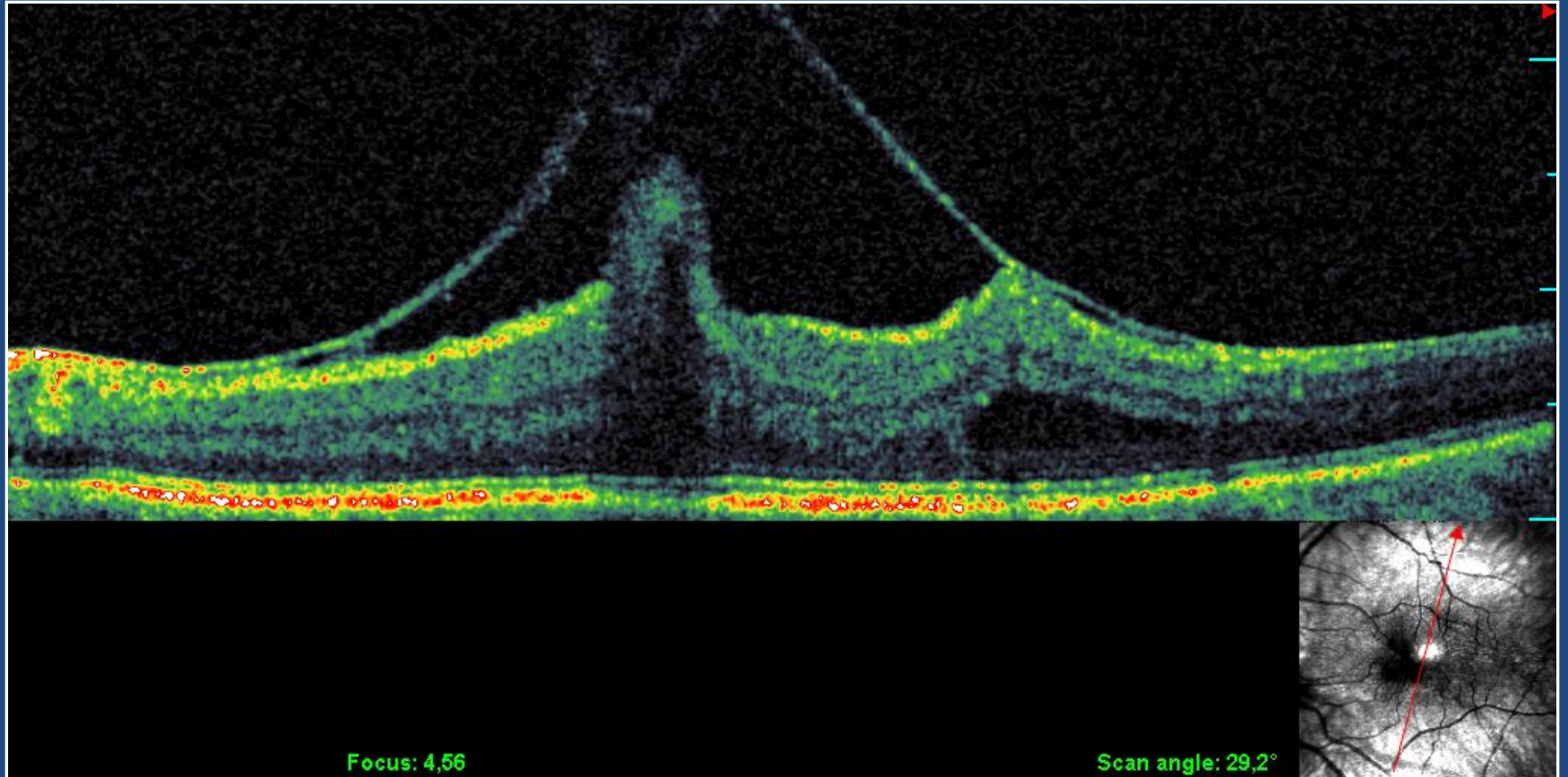
VMT / OCT ve tipleri

- Perifoveal inkomplet arka vitreus dekolman
- Foveaya vitreus yapışıklığı:
 - * V şeklinde fokal yapışıklık (< 1500 mikron):
 - Prognoz daha iyi
 - Foveal kavitasyon (psödokist), maküler hole, skizis, FFA' da sızdırmayan KMÖ
 - * Geniş yapışıklık / nazalde yapışık, fovea temporalinde ayrılma (> 1500 mikron):
 - Prognoz daha kötü
 - KMÖ, difüz kalınlaşma, maküler hole, maküler atrofi

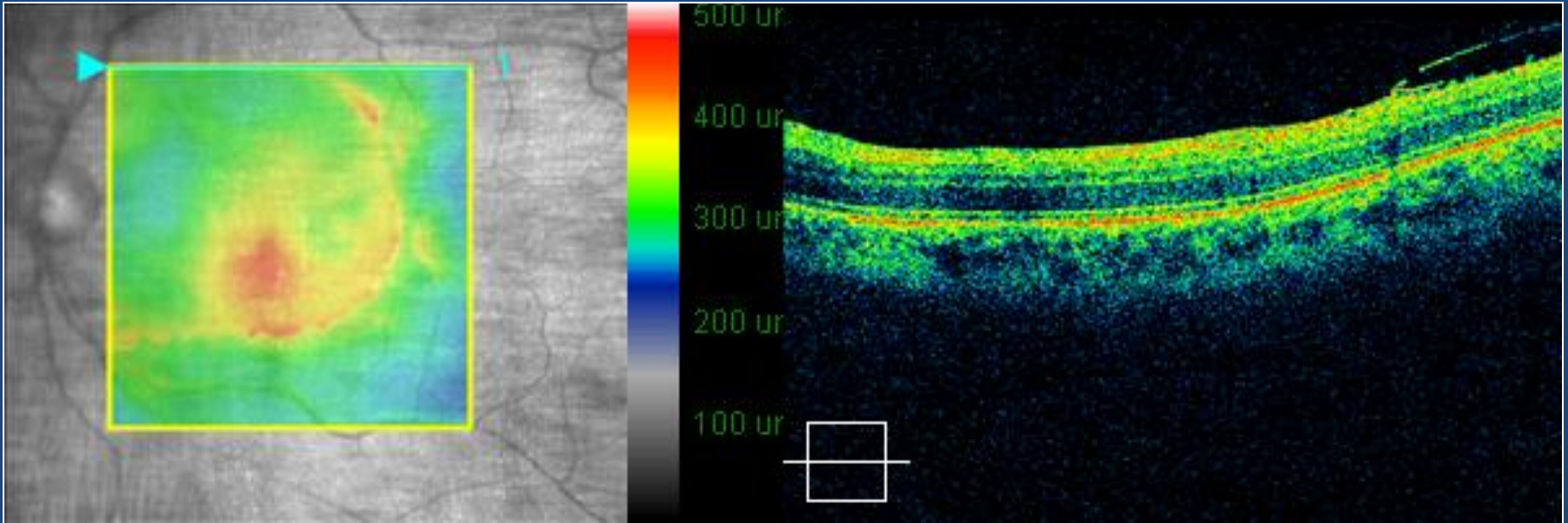
V şeklinde fokal yapışıklık (Kavitasyon = psödokist)



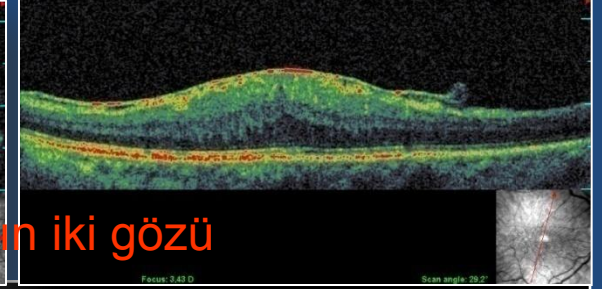
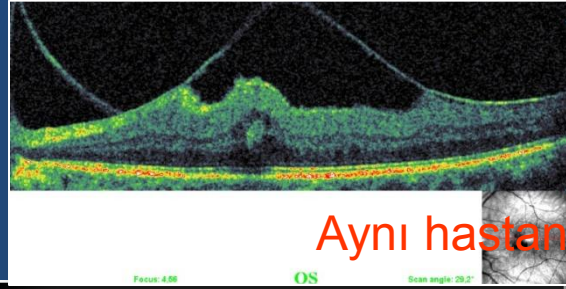
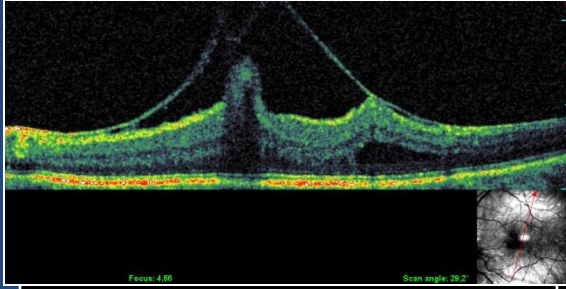
Geniş yapışık VMT



Masa şeklinde geniş yapışık VMT



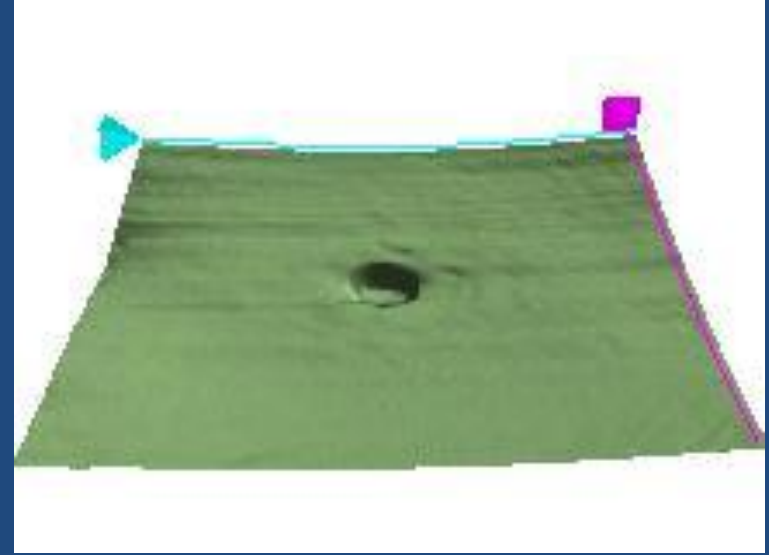
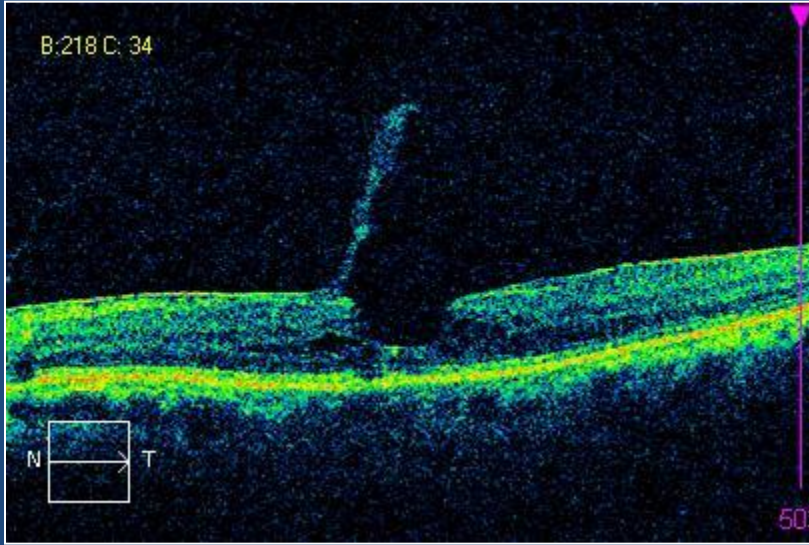
ERM / VMTS arasındaki farklar



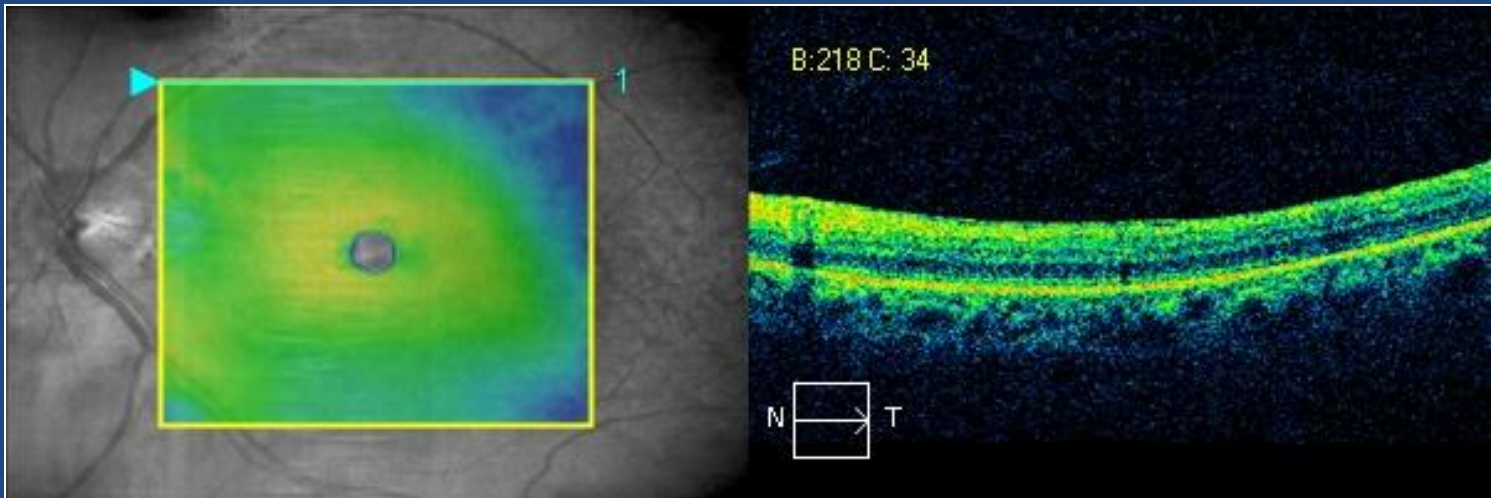
Aynı hastanın iki gözü

ÖZELLİK	VMTS	ERM
PERİFERİK / ARKA VİTREUS AYRILMASI	Var / yok (makülaya persistan yapışıklık)	Var / var (vitreoskizis)
TRAKSİYON VEKTÖRÜ	Ön-arka (aksiyel)	Tanjansiyel
MAKÜLADA BURUŞUKLUK	Az Metamorfopsi yok	Çok Metamorfopsi var
MAKÜLADAKİ MEMBRAN	Daha az parlak	Daha çok parlak
GÖRME	Hızlı ilerler, ciddi görme azalması	Yavaş ilerler, görme stabil
FAYDALI TEST	Sd-OCT, En face OCT çok üstün	Klinik = Sd OCT
MAKÜLAYA YAPIŞIKLIK	Fokal	Multifokal
TR. RETİNA DEKOLMANI	Var	Yok
FFA DİSK SIZINTISI	Var	Yok

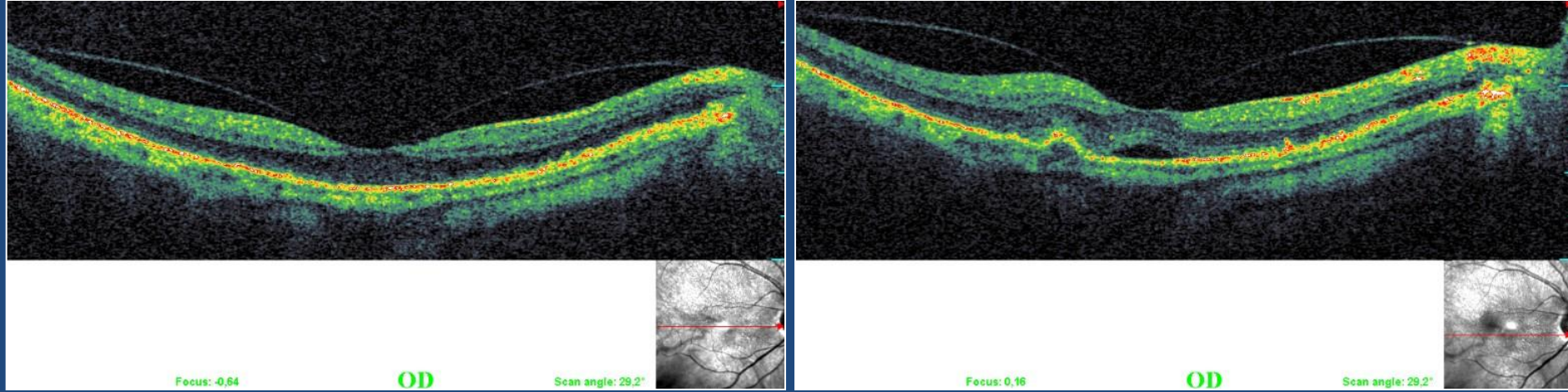
VMT / Lameller hole



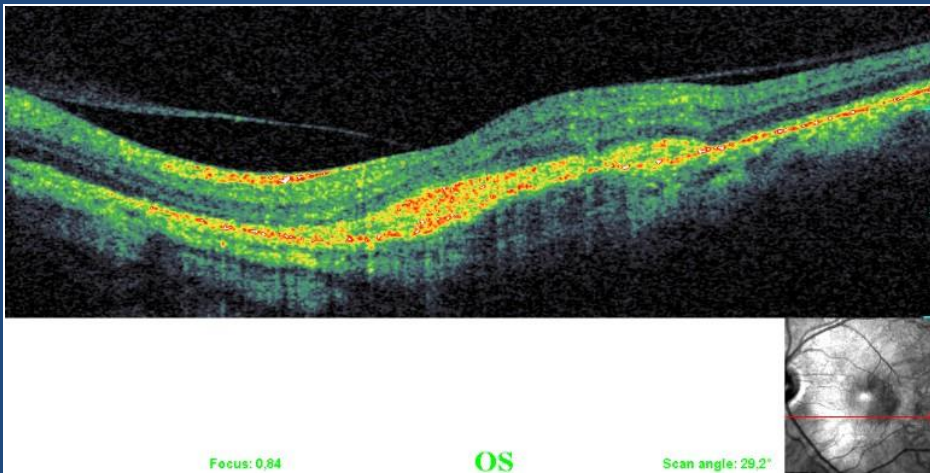
- Dış nükleer – dış pleksiform tabakalarda ayrılma (Ters örs bulgusu)
- Fotreseptör tabakası sağlam
- Komşu retina intakt



VMT / CNV gelişimi ?

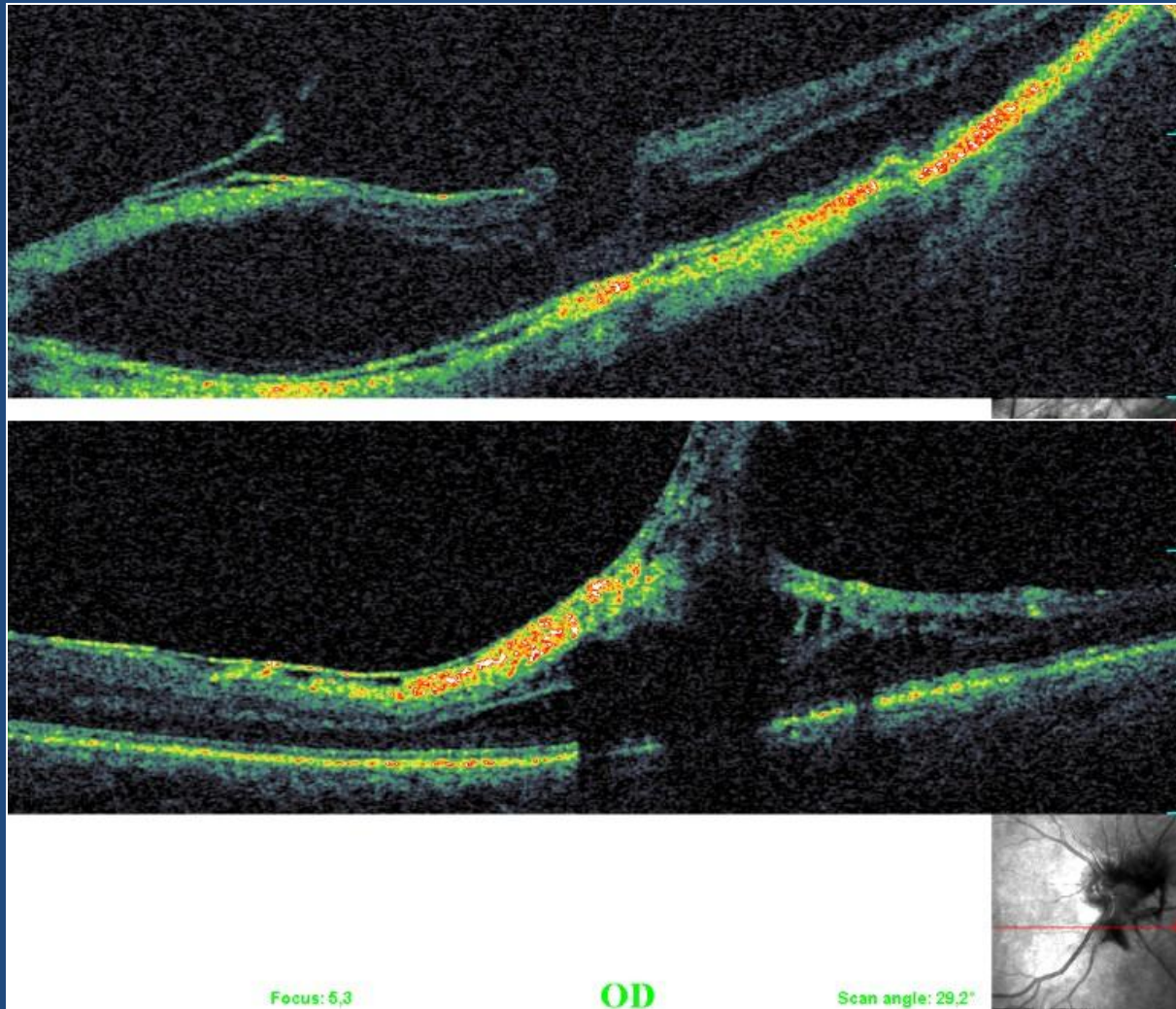


Sağ: VMA ----- VMT ----- CNV gelişimi



Sol: VMT, dissiform skar

VMT / Miyopik makülopati - skizis



VMT tedavisi

Maküler hole yoksa

- Cerrahi ile 10-15 ve üzeri harf artışı
- Spontan ayrılmanın sıklığı ve süresi çok değişken
- Hastalığın doğal gidişi iyi değil

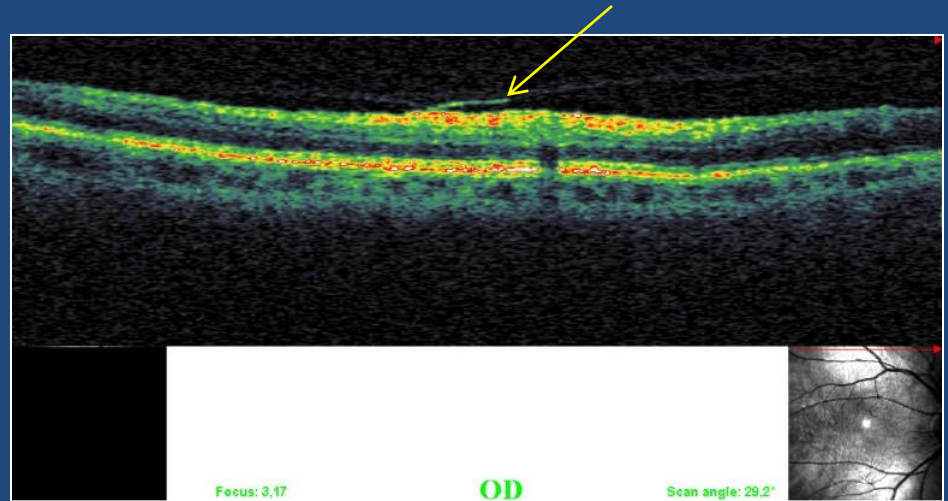
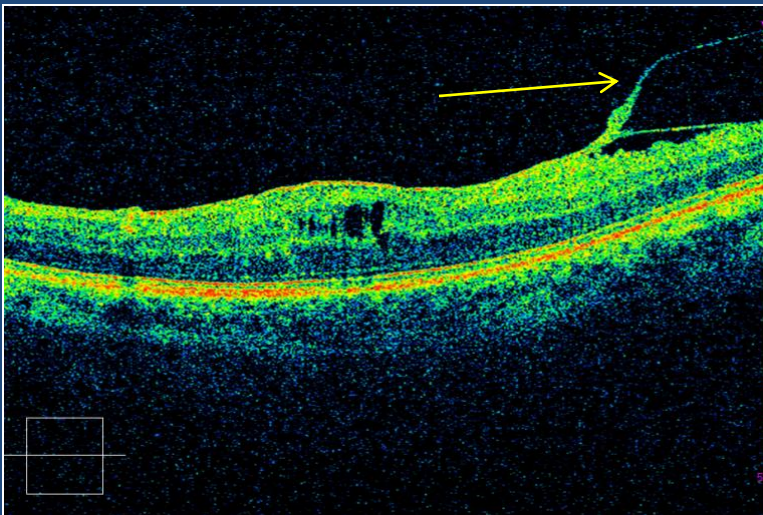
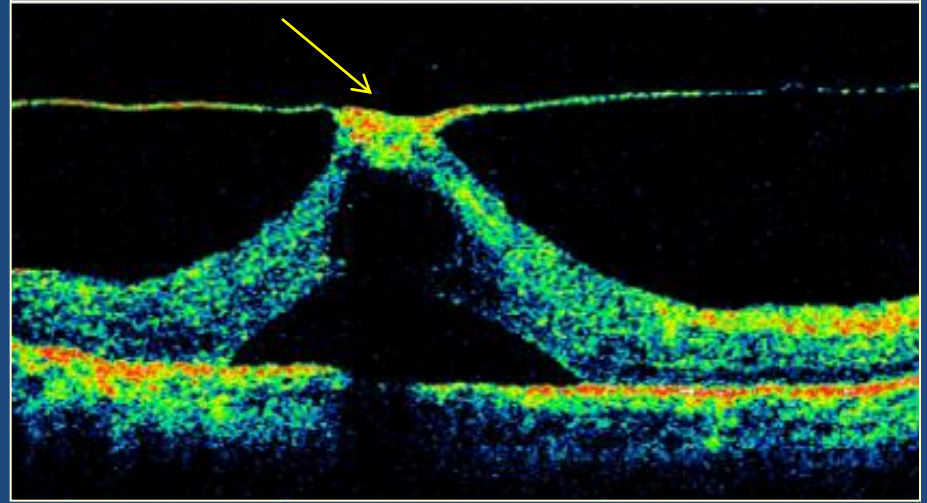
Cerrahi zamanlama için tek kriter yok

Maküler hole varsa

- Evre 2 holde, cerrahi ile daha iyi anatomik (% 90) ve görsel sonuçlar (15-20 ve üstü harf artışı)
- Girişim kararı daha kolay

OCT' de sıkı yapışıklık göstergesi / Cerrahi endikasyonu

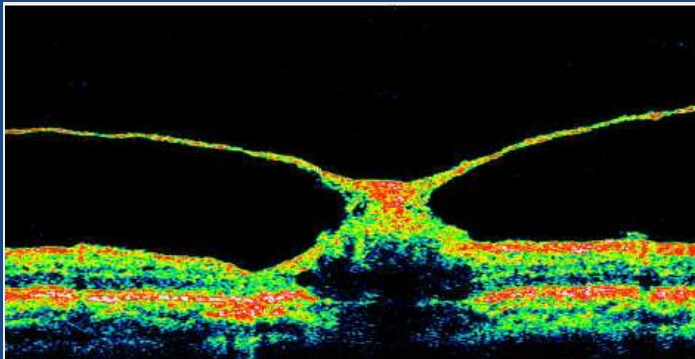
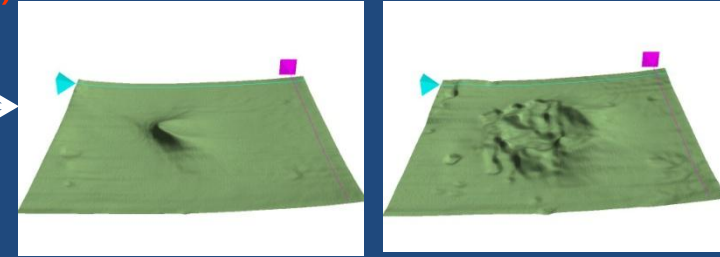
- Hücrelerin maküla üstünde çoğalması, kısmi dekole arka hiyaloid yüzde de ilerlemesi
- Düşük yansıtıcı bölgelerle komşu kalın hiperreflektif plakoid zonlar
- ERM / vitreus yapışıklığının kuvvetlenmesi



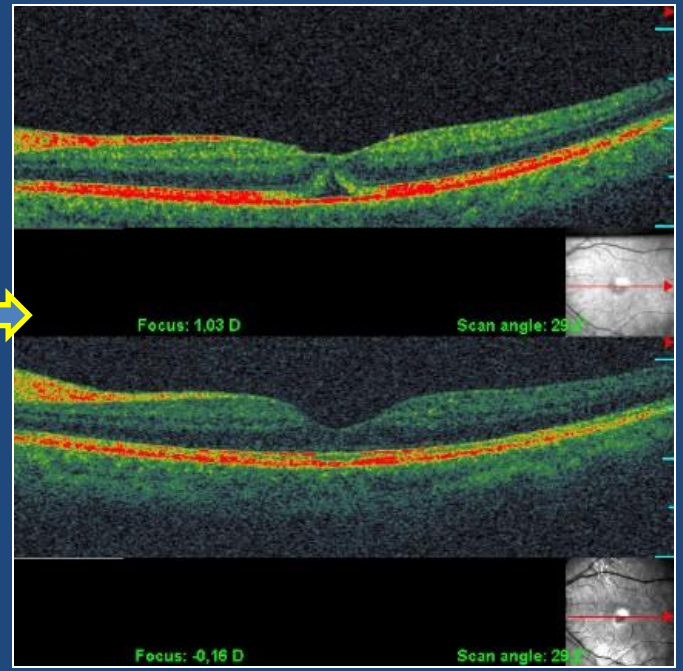
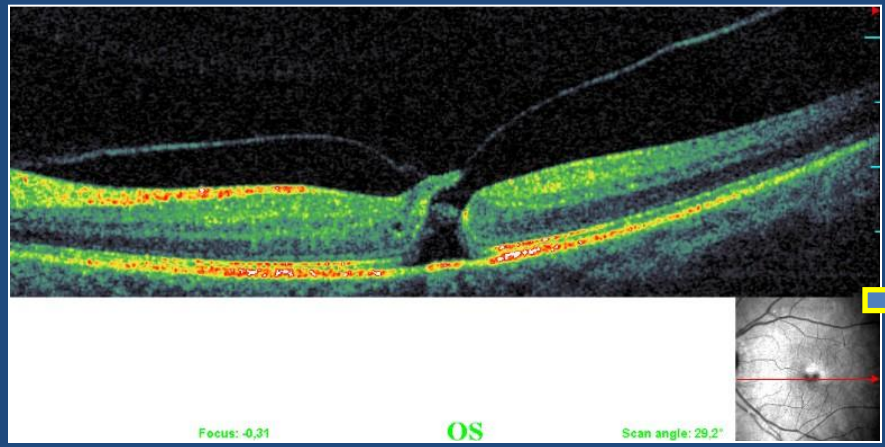
Takip ve tedavi kararında OCT

- Erken cerrahi: görme 0.4 ve üstü (eskiden: 0.2 ve altı)
IS / OS bandının bozulmaması
(iyi preop görme = iyi postop görme)
- Santral maküler kalınlık: $\geq 350 \mu\text{m}$
Traksiyonun / maküler kalınlığın takipde artması
(Santral maküler kalınlık görme ile ters ilişkilidir,
ama tek başına prognostik faktör değil)

- Segmente İLM' da pililenme artışı →
- Dekole arka hiyaloidde, ERM ile devam eden hiperreflektif / kalın bölgeler

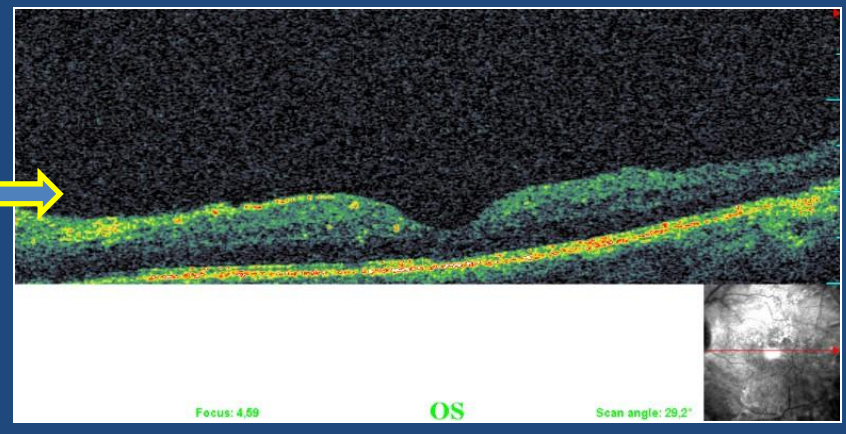


OLGU 1



PARS PLANA VİTREKTOMİ

OLGU 2



CERRAHİ SONRASI

- Cerrahi sonrası foveal kontur tamamen normale dönmeyebilir, fakat görme artışı devam eder
- Cerrahi sonrası iyileşme 6 – 12 ay devam eder
- Cerrahi sonrası % 50 – 75 olguda görme artışı, normal görme nadir

Ocriplasmin / Vitreolizis

- Nonspesifik proteaz (proteolitik enzim)
- Recombinant DNA teknolojisi ile üretim (2,5 mgr / ml)
- Vitreo-maküler arakesitteki makromolekülleri hedef alır (fibronektin, laminin, kollajen)
- İntravitreal tek enjeksiyonu yeterli ve emniyetli
- 28 gün içerisinde sonuç alınabilir

MIVI – TRUST : VMT \pm tam kalınlıklı maküler hole olan semptomatik vitreo-maküler adezyon

MIVI-TRUST: Ocriplasmin / Vitreolizis

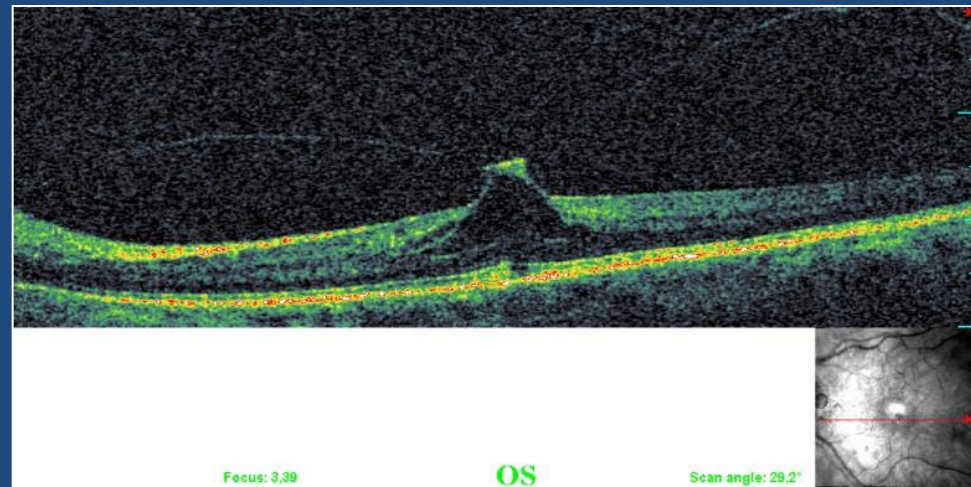
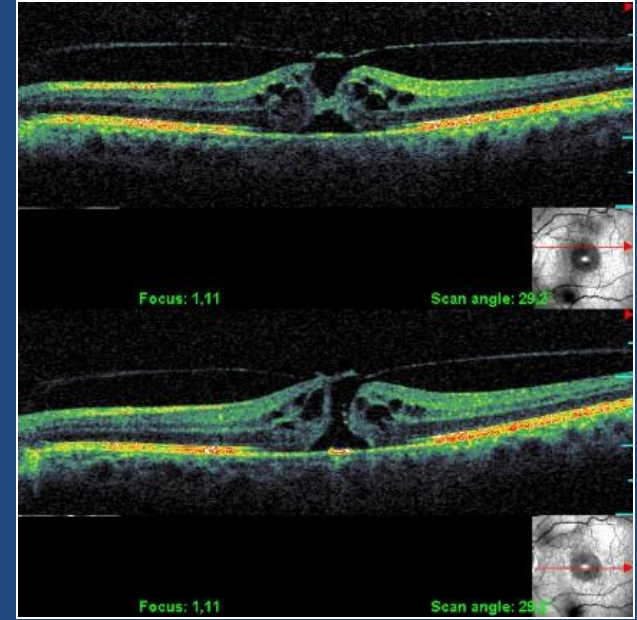
- Tek intravitreal enjeksiyon sonrası 28. günde, VMA' nun ayrılması:
Ocriplasmin: % 26,5 / Salin enjeksiyonu: % 10,1
- VMT + 400 µm ' den küçük maküler hole varsa, kapanma % 40,6
- 1-2 günde etkisi başlar, % 80 gözde 2 hafta içinde PVD oluşur

Yan etkiler

- * Erken dönemde: fotopsi, yüzen cisimler, ağrı, fotofobi
7. günde azalmaya başlar, 6. ayda normal olur
- * Olguların bazısında VA azalır, subfoveal sıvı birikir.
1. ayda sıvı azalır, 3-6. ayda kaybolarak VA artar
- * Nadiren, traksiyon veya holde kötüleşme ----- - cerrahi gereği
- * Yüksek dozda, lens dislokasyonu
- * Sarımsı görme (% 2): 1. günde başlar, 3. ayda kaybolur
- * Retina yırtığı, dekolmanı riski artmaz

Farmakolojik vitreoliz için uygun hastalar

- VMT + 250 μm ' den küçük tam kalınlıklı maküler hole
- Epiretinal membranın bulunmaması
- Vitreo-maküler adezyon alanınının 1500 μm ' den küçük olması
- Fakik, 65 yaşından genç olgular (?)

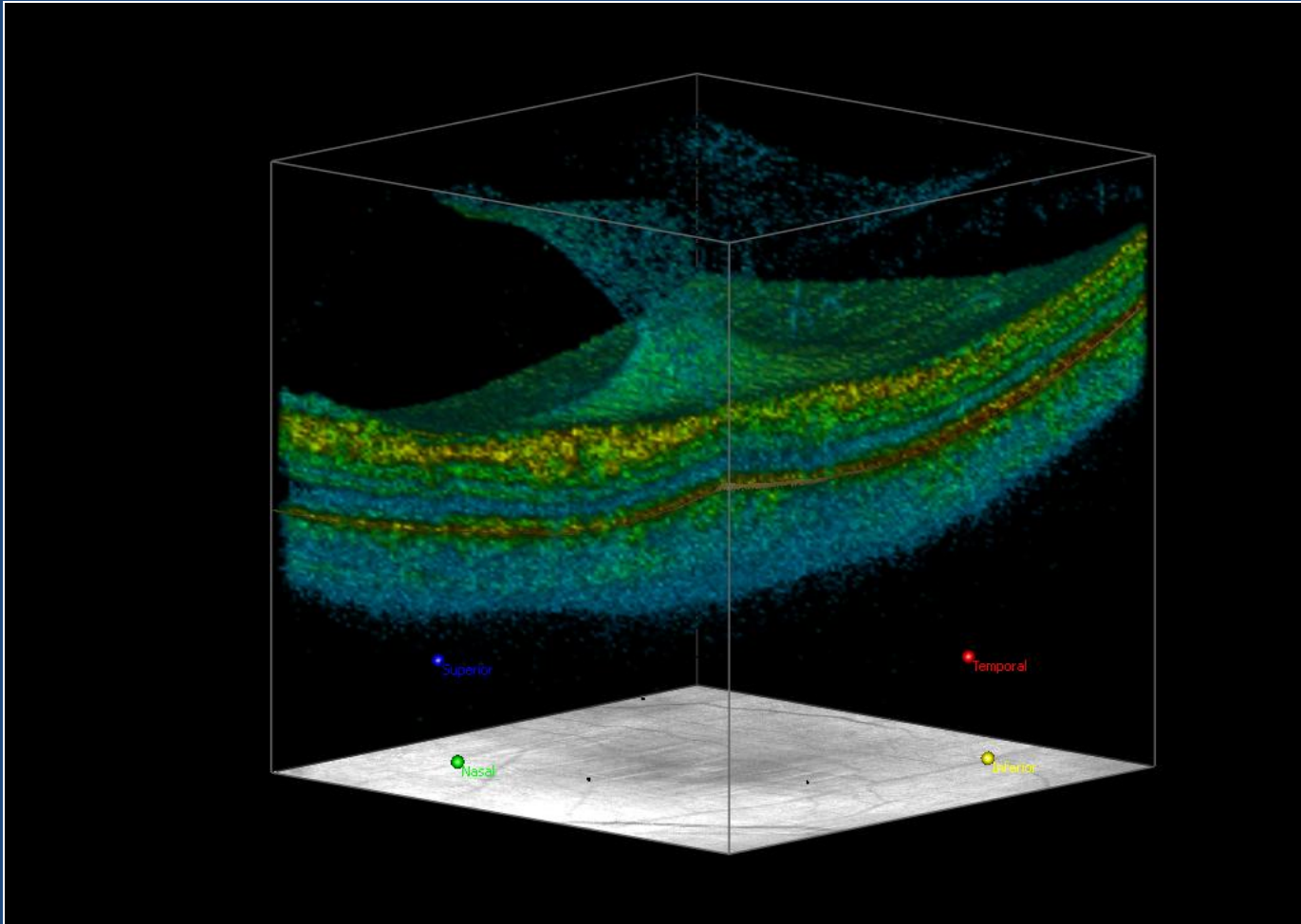


Farmakolojik vitreolizin PPV' ye olan üstünlükleri

- Cerrahinin ve göz içi tamponatların riskleri yok
- Vitreusa daha az travmatik
- Arka kortikal vitreus tam ayrılır, daha fizyolojik arakesit
- Fibrovasküler membranlar gelişemez
- Daha erken girişim imkanı verir
(Cerrahi, daha ileri ve ciddi olgulara saklanır)

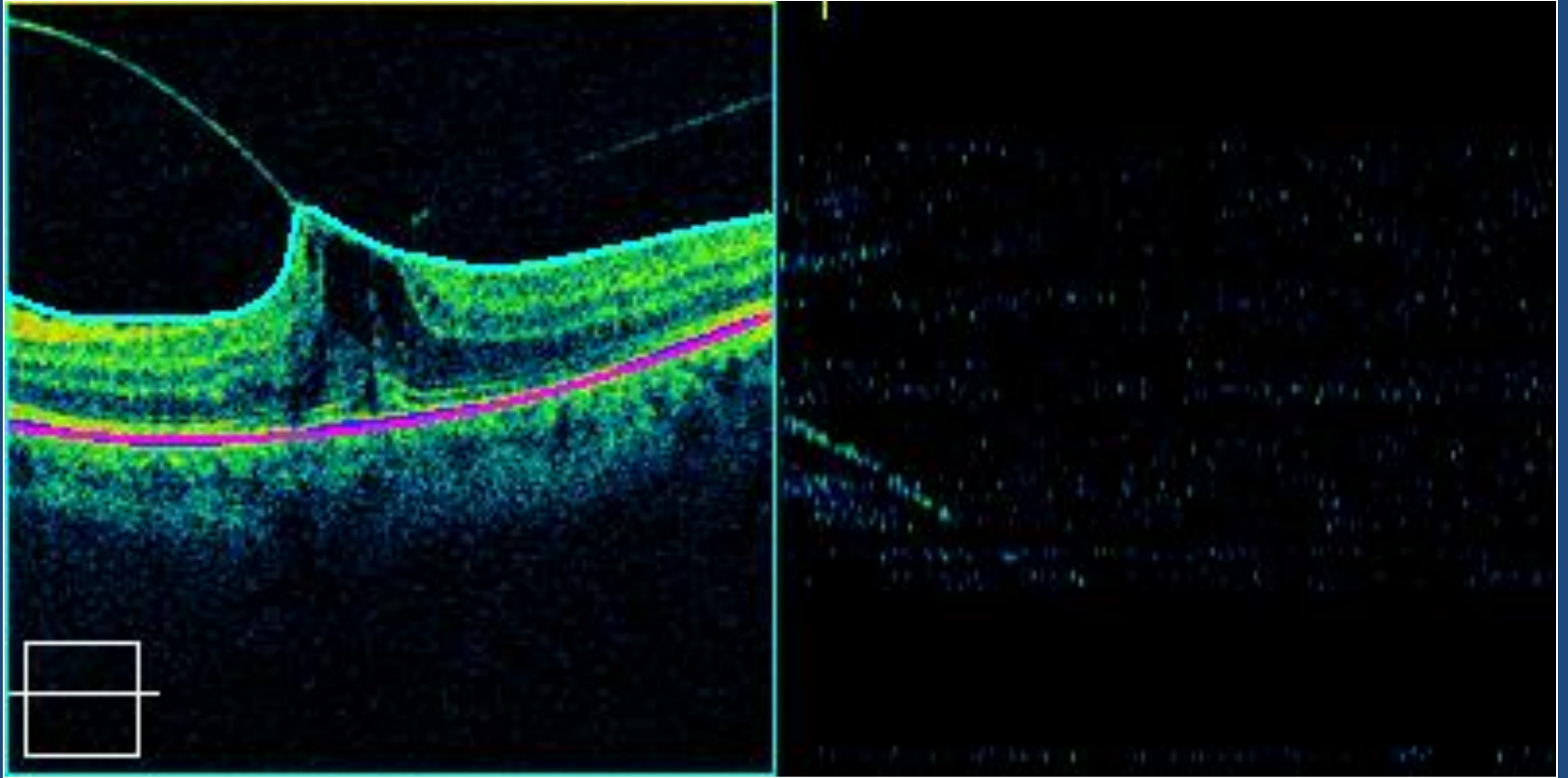
Vitreo-maküler traksiyonun tanısı, takibi ve tedavisinde faydalı olabilecek ilave gelişmeler

ÜÇ BOYUTLU OCT & SEGMENTASYON



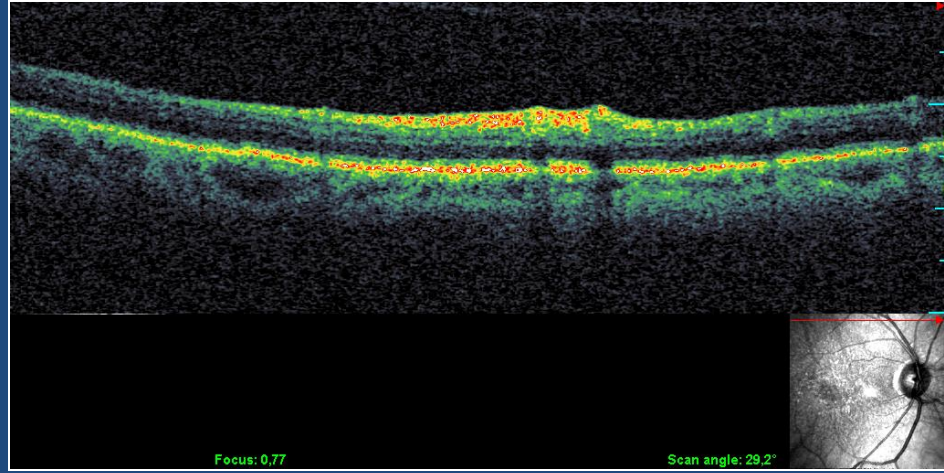
Daha yüksek resolüsyon
Vitreoretinal arakesitin daha iyi görünmesi

EN FACE = C SCAN = TRANSVERSE = CORONAL
FOKAL VMT

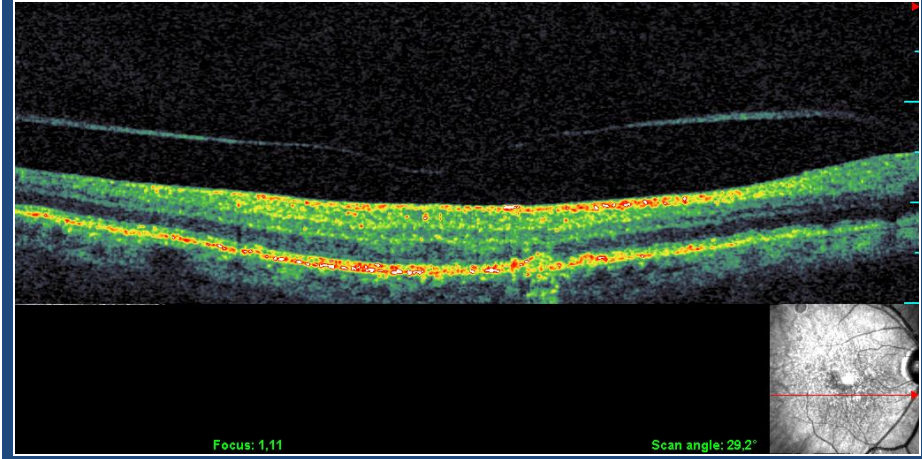


Yapışıklığın / traksiyonun kenarları ve uzanımı daha iyi görülür
Daha hassas cerrahi planlama

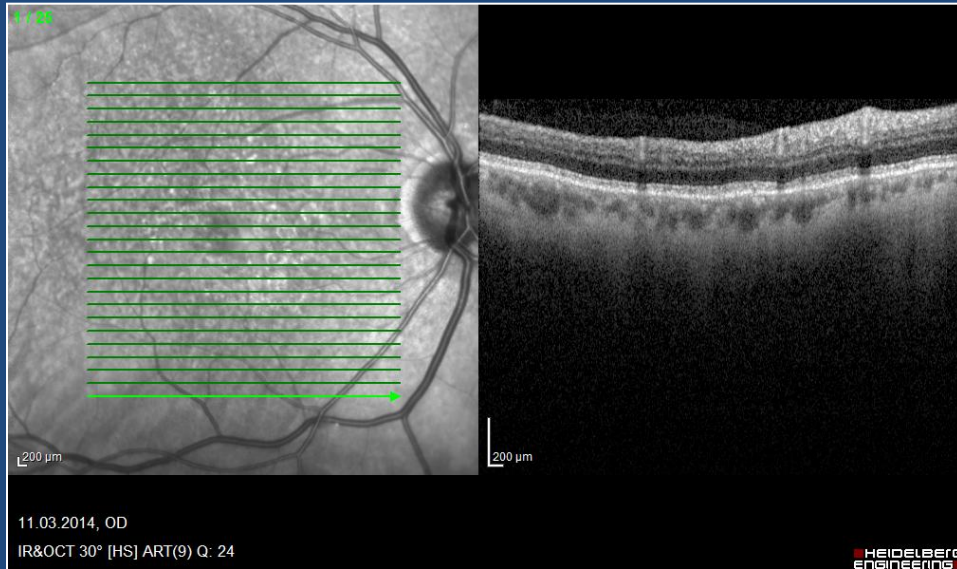
Aynı hastanın aynı gözünün peş peşe yapılan OCT' ler



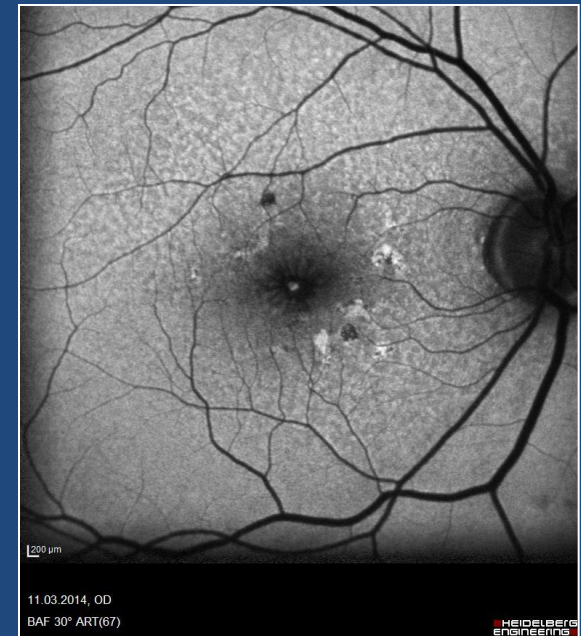
Maküla deliği yok



Evre 2 maküla deliği



Maküla deliği ?



VMT / SONUÇ

- VMT, belirgin metamorfopsi yapmadan görmeyi hızla bozar (vitreo-papiller traksiyon)
- Sadece klinik muayene yeterli değildir, Sd-OCT çok faydalı
- Spontan ayrılmanın zamanı ve sıklığı çok değişkendir, cerrahi kararında birkaç faktör birlikte düşünölmeli
- Ocriplasmin, erken girişim imkanı sağlar. Cerrahi, daha ileri ve ciddi olgulara saklanabilir